2015

Planning for Growth

Reviewing Economic Growth Trends in the Springfield-Sangamon County Economic Area

SPRINGFIELD-SANGAMON COUNTY REGIONAL PLANNING COMMISSION

Advising + Planning + Evaluating + Leading

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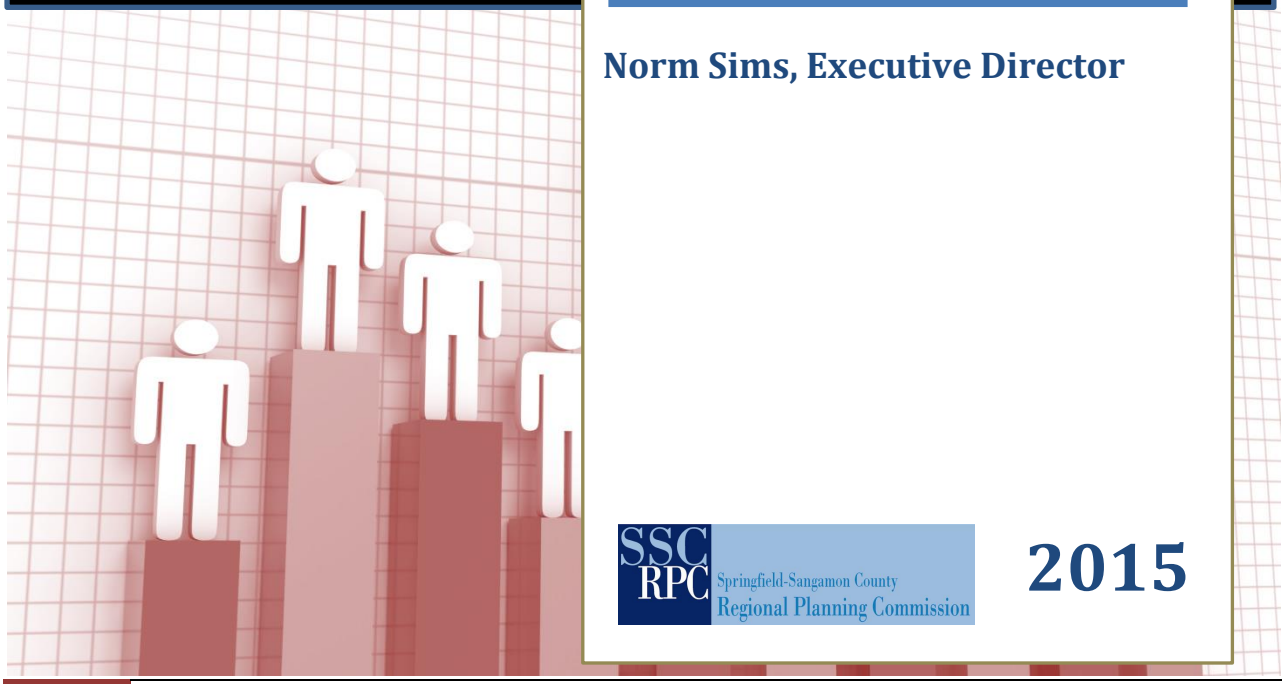

SSC RPC Springfield-Sangamon County Regional Planning Commission

2015

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Executive Summary

This report is an extension of the SSCRPC's previous work reviewing the economic resilience of the region's economy. It also is intended to address a void in local economic development planning, as the SSCRPC found that various other assessments of the regional economy looked only at short-term trends, sometimes disregarding larger, fundamental forces that may be at work over longer periods of time.

Although recent unemployment reports show that the region is rebounding from the recent national recession, it is still unclear as to whether this is representative of a long-term trend toward growth. That is because ***this study found that while the region's economy performed well during the 1970s and 1980s, these gains began to noticeably erode in the 1990s, with more recent improvements not yet making up for this decline in real terms.***

We believe that this is a different dynamic than that seen in three peer benchmark regions, and ***appears to be due to such forces as: reductions in State government employment in the area; a lack of industrial diversity leading to weaknesses in core industry sectors and clusters; weakness in industry sectors fundamental to growth in the modern technology-based economy and business innovation; a decline in the rate of population growth, particularly in age cohorts that will make up tomorrow's workforce, which may be due to reduced employment opportunities.***

This study considered the economic area as being limited to Sangamon County, as previous research found the county to be relatively unique as a labor market area due to some historic business patterns affecting its economic dynamics. It was also economically different from other regions due to its being home to the state capital, which is and has been a major economic force and job creator for the region.

The SSCRPC found that this created a relatively stable economy for the area; one not subject to the economic "lows" of some parts of Illinois, but also not seeing the "highs" of other regions with a more diverse industry base and better economic inter-connectivity with other market areas.

The area shows both weaknesses and strengths; some weaknesses arising from reductions in state employment and some strengths arising from labor commuting patterns, interconnected development opportunities, and the presence of transportation corridors that link available business expansion locations.

The SSCRPC considered five critical factors as being relevant to its review of economic growth:

- The rate of population growth, as well as age groupings within that population and their dependency.
- The extent to which personal wealth is growing in real terms in the region.
- The degree to which job growth is occurring in the region.
- The nature of business growth in the region.
- The extent to which the local economy may support the growth of high-technology businesses.

In each of these areas the SSCRPC attempted to look-out over longer periods of time than is commonly done in studies of this type, and to seek comparisons with peer benchmark areas. It also applied the Regional Economic Analysis Project's *Leading, Slipping, Gaining, Lagging* (LSGL) analysis to the first four areas to compare long-term versus near-term gains and losses. ***In none of these areas did LSGL analysis find this economic region to be "Leading", meaning that it did not demonstrate both long and near-term gains.*** The results found:

Population Growth: ***Slipping***. The study found that the population in the economic area had increased, but at slower rates in the last three decades than it had in the prior two, suggesting that population growth is trending downward. While the population *was* growing, this slowing would result in an estimated

decline in the population growth rate of almost two-thirds between 2000 and 2015.

It also found a decline in the number of those in the 19 and younger age group, which will have an effect on the workforce in future years, and that while net in-migration is occurring, it is not likely to replace the decline in native population. It also found that the area may be hard-pressed by the expanding portion of the population in "dependency" categories: those younger than 19 or 65 and older.

Based upon LSGL analysis, the area was found to be "Slipping", as while its annual population growth rate had exceeded the state's over the longer-term, it had not over the near term.

Growth of Personal Wealth: *Gaining, but weakly.* The SSCRPC considered three aspects of personal wealth: Personal Income Growth, Per Capita Income Growth, and Household Income Growth. The Commission found similar results in all three areas, in that Sangamon's statewide rankings showed it lagging behind its central Illinois peer benchmark counties in recent years, moving it away from the middle of all Illinois counties. This is, for example, represented in the findings related to median household incomes, where in 2014 constant dollars the economic area saw a decline of almost 8% by 2010, making real household income comparable to that in 1990.

There has been some improvement recently, as the area's real total personal income growth was below the state average in past years, but moved above it in 2013, leading to the LSGL analysis classifying the area's income growth as "Gaining", but weakly.

Job Growth: *Slipping*. The study found job growth in the area to be toward the mid-range of all Illinois counties from 1970-2013, but below that of its peer, comparison counties. It found declines of 5% or more in half of the 16 industry sectors that make up the regional economy for which data was available. Most job growth declines have occurred since 1990, and are only partially related to the recent recession, appearing to match changes in business growth and decline over several decades. This includes some core sectors, but is most apparent in state government.

As employment growth in the region was found to be above the state average from 1970-2013, but below it in most recent years, LSGL analysis classified the area as "Slipping".

Business Growth: *Lagging*. The Commission reviewed business growth trends in the area, focusing on growth of total number of business establishments, industry earnings, Location Quotient, Shift Share, and Component Contribution to the larger economy. As with other indicators, the results show the area falling behind state and national averages as well as peer counties in recent decades. One finds, for example, that real industry earnings have continued to fall in the economic area since the 1990's, and to do so noticeably.

When LSGL analysis is applied, the Sangamon area is classified as "Lagging", as its real total industry earnings growth trailed both the State's long and short-term average.

High Technology Business Growth: *Questionable*. In looking at this important component of the area's economy, the SSCRPC found the area falling behind the nation, state and peer counties in both average high-technology employment share and percentage of change in high-tech employment. It also fell behind in such contributing factors as patents per 1,000 workers, however performed well in the share of total employment held by technology-based knowledge occupations.

Overall the Planning Commission found:

- ***That the economic strength of the area had eroded over time, but this erosion had not been sufficiently noticed.***
- ***The area showed strength in such areas as Biomedicine and Biotechnology, but weakness in other core sectors and clusters.***
- ***The rate of population growth was slowing, which will be inter-twined with the area's long-term economic success.***

1. Introduction

The impact of what has been termed the Great Recession led many communities and regions across the country to consider ways by which they might increase their economic resilience: their ability to "bounce back" from economic downturns. With this in mind, in 2014 the Springfield-Sangamon County Regional Planning Commission (SSCRPC) began to look at the economic resiliency of the Springfield metropolitan area based upon an index of factors developed by the Buffalo Regional Institute of the State University of New York.

Using this *Resilience Capacity Index* (RCI), the SSCRPC's review[1] allowed for the measurement of the greater Springfield metro area's ability to respond to economic stress, finding that the region scored well on several of the factors compared to national and benchmark Illinois peer metropolitan areas, but poorly on two very important sub-factors: *Economic Diversification* and *Business Environment*.

The Economic Diversification factor measured the degree to which a metropolitan economy differs from the national economy by the proportion of its jobs in goods-producing, service-producing, and government sectors, while the Business Environment factor measured the economic dynamics of a region based upon its proportionally high levels of small businesses and business "churn" (starts and stops), availability of residential high-speed internet connections, changes in the number of broadband holding companies, and availability of ample venture capital.

The SSCRPC found this result worrisome as an indicator of the region's potential for long-term economic growth, as economic diversity and the nature of the business environment are fundamental to future economic success as well as resilience, and both are critical components for economic development planning.

In addition, the SSCRPC was recently called upon by the City of Springfield and Sangamon County to gather regional market information as part of a joint application under the state's Enterprise Zone program, and found that no previous long-term review of the region and its functioning as an economic area had ever been done. The two most recent analyses – one done by Market Street Services, Inc[2]., and one by The Pathfinders[3] -- only looked at recent years, potentially leaving some long-term trends unreported.

All-in-all, this led the SSCRPC to believe that a review of the dynamics of the regional economy over a longer period of time might be useful for economic development planning purposes as the metro area enters the second half of the decade.

Reviewing a region's economy is a large task, and many factors could have been considered, but this review ultimately focused on five factors believed important in gaining a better understanding of the Springfield-Sangamon County metro region's economy:

- The rate of growth of the region's population and some associated factors.
- The extent to which personal wealth is growing.
- The degree to which jobs are growing in the region.
- The nature of business growth in the region.
- The extent to which the local economy supports high tech business growth.

While reviews of this type typically look at the current health of a region, we believed it important to consider how the region has trended over time so as to help identify any larger forces that may be at work that could be missed if only current conditions were considered. For this reason the SSCRPC opted to look largely at the time period from 1970 to the most current period for which data is available, as this period marked the end of the industrial boom that followed U.S. growth after the Second World War and prior to the Midwest regional decline in what came to be known as the "Rust Belt" states. Doing this also helped place the recent recession in some larger context, not allowing this significant national downturn to mask larger economic trends.

As was the case with the resiliency study, we felt that it would be useful to look at the region in relationship to the performance of the state as a whole as well as to a set of peer economic areas. This provides a better assessment of the broader economic opportunities and challenges that may be affecting our region due to larger statewide trends.

To conduct this analysis the SSCRPC was assisted by many data providers. They included the National Association of Counties, ESRI, Inc., the U.S. Economic Development Administration, Purdue Center for Regional Development, Indiana Business Research Center at Indiana University's Kelly School of Business, the U.S. Bureau of Economic Analysis, and especially the Illinois Regional Economic Analysis Project (IL-REAP).

While many economic data resources were drawn upon and are cited, the resources of IL-REAP were especially helpful to our efforts, and the reader will find that REAP results are reported extensively in this document. Using data compiled by the Regional Income and Regional Product divisions of the U.S. Department of Commerce's Bureau of Economic Analysis (BEA), REAP provides data tables and detailed analysis of the trends and composition of the major economic indicators available for counties, states, and regions across the nation. REAP[4] also exclusively produces and packages data and analysis for additional regional configurations not available directly from BEA. The data are annual, spanning 85 years -- from 1929 to 2013[5] -- and the SSCRPC primarily used this data to look at regional performance from 1970 to 2013.

It is our hope that the fruits of this work will assist those involved in economic development to better assess the opportunities and challenges the region faces, develop plans that effectively identify the strategies and tactics necessary for community and business development, and better focus their energies and resources on specific lines of effort that are likely to lead to long-term success.

It is the belief of the SSCRPC that "economic development" is not something that local units of government or business interests *do*, but is instead the outcome of strategies intended to support both *community development* and *business development*.[6] In the presence of consistent and effective *local leadership* – a multiplier in the encouragement of community and business development – improvements in the business climate can be made that result in job creation, rising real incomes, increased private capital investment, and the provision of the hard and soft local infrastructure necessary to create a vital cycle in the region that encourages long-term economic growth.

2. Considering the Sangamon Economic Area and its Dynamics

Economic development occurs in *places*, geographical locations, and more often than not, those places are influenced – for good or ill – by the conditions of the region in which they exist.

The economic dynamics of a region are often addressed by reviewing its labor market area (LMA). An LMA can be defined as an economically integrated region in which residents can find employment within a reasonable commuting distance or can change their employment without changing their place of residence.[7] Typically U.S. Bureau of Labor Statistics' (BLS) Labor Market Areas are called upon as the focus of an economic review such as this one, but in less urban regions – such as that studied here – BLS identified areas simply reflect Metropolitan Statistical Areas (MSAs) as that provides for some ease in compiling, reporting and evaluating employment, unemployment, workforce availability and related topics. That is certainly the case for Sangamon County, as the BLS labor market area simply identifies the Springfield MSA, which combines the populations of Sangamon and Menard Counties.[8] Unfortunately this approach can cloak unique aspects of an economic area that tell more about an area's economic dynamics and business connectivity.

This being the case, and while commuting flows are a consideration in defining and delineating labor market areas (since the extent to which workers are willing and able to commute between two places is seen as indicating the degree of economic integration in the area),[9] this approach sometimes does a poor job of assessing *both* commuting flows *and* business interactions – the regional market dynamics – thus hiding relevant and unique economic development strategy considerations. This is often problematic since economic development planning must not only take into account where existing and potential employees might live vis-à-vis existing and potential employers, but also how those employers might cluster or interact, and the likelihood that this interaction will result in business retention, expansion and attraction in the market area: the purposes for which economic development plans are created.

This problem was identified as early as 1990 in a consideration of counties as units of labor market analysis, as researchers found that LMA commuting zones did not take into account distinctions that can be made based upon the nature of metro vs. non-metro areas (i.e., urbanized versus less-urbanized), the nature of the "central" component of the zone (e.g., small metro center, medium metro center, major metro center), overlaps between and among zones, and how the zones functioned economically in their regions[10]. This is certainly the case for Sangamon County, which led the SSCRPC to instead consider the county as a unique *economic area* for the purpose of this analysis. The entirety of the county was not identified as the area of analysis for geopolitical or jurisdictional reasons, but rather due to unique and historic economic conditions in the region as well as current and anticipated labor commuting patterns.

The Sangamon economic area contained a total population of 197,465 according to the 2010 census. The 2014 population estimate is 199,056, and is further estimated to grow to

201,257 by 2019.[11] The 2014 civilian employed population is forecast as 93,322, compared to 97,917 in 2010.[12] This projection demonstrates a decline in the civilian employed population of almost 4,600 workers. In large part this decline is seen as primarily due to three forces*: the ageing of the native population concurrent with lower native population birth rates, a declining rate of in-migration into the region caused by a lagging job market, and reductions in public employment due to reductions in public sector employment in the area*[13]. The effect of these forces in relationship to the economic dynamics of the area will be further addressed below in this report.

Unique and Historic Economic Patterns

Past research found that the Sangamon economic area is unique as it is so self-contained, having limited sector linkages to labor pools and business markets in surrounding counties. This dynamic was first identified in 1993 based upon work conducted by the Corporation for Enterprise Development (CfED)[14] that built upon concepts such as those contained in the 1990 study noted above. This nation-wide analysis looked at local regions – identified by commuting zones – to determine both their nature as economic *and* labor markets, and their capacity for economic growth. The nature of each region was classified based upon worker travel patterns as well as the nature of the region; for example whether it functioned more like a bedroom community than an urban industrial center. This allowed some consideration to be given to such things as the area's "center size" and nature, and its inter-business market interactions (i.e., the extent to which businesses buy from and sell to other businesses in the region).

Using CfED's data, the Illinois Department of Commerce and Community Affairs[15] found that Sangamon County acted primarily as a singular market area, having little economic interaction beyond its borders except for some business and worker interactions in Morgan County, thought to primarily be due to interactions with Jacksonville. This was seen as largely arising from residents in that area travelling to Springfield for employment with state government, and there being state facilities in the Jacksonville area that resulted in interactions between those facilities and state agencies in Springfield as well as some local supporting businesses that bought from or sold to business establishments in the state capital.

While this was seen as creating a rather stable local economy for Sangamon County (one which saw neither highs nor lows as the state and national economies changed) because it was so self-contained, it was not seen as providing a particularly diverse economic base nor functioning well in providing diverse employment opportunities for those entering or re-entering the workforce. This dynamic, which identified Sangamon County as a regional economic area with limited business interactions beyond its bounds, continues to be demonstrated by the nature of its existing industry clusters.

A 2002 analysis of the industry clusters in the region by the City of Springfield found 10 existing major employment sectors: Finance, Insurance and Real Estate; Government (predominately state); Agriculture; Business Services; Communications and Utilities; Retail Trade; Transportation; Wholesale Trade;

Construction; and Light Manufacturing[16]. In terms of labor market, all of these clusters were found to be largely self-contained within the greater Springfield area, with Government being the only one drawing significant numbers of commuting workers from outside the county at that time. However, this study also found that the existing clusters offered opportunities for growth in six additional value-added areas that had the potential to somewhat diversify the regional economy and bring in or generate additional wealth: Product Distribution; Health Care; Medical Technology and Bio-Medicine; Food Processing and Agribusiness; Consumer Services; Technology; Tourism and Hospitality.

This employment and industry mix did not fundamentally change over the next nine years.

A 2011 target cluster analysis of the region done for the Greater Springfield Chamber of Commerce by Market Street Services, Inc.[17], found that the county-wide region represented opportunities in four major industry clusters: Financial and Professional Services; Health Care Services; Heritage and Educational Tourism; and Truck and Rail Freight Transportation (Wholesale Trade and Distribution, and Diverse Manufacturing). The very nature of these business groupings again demonstrated how constrained and unique the economic area is when compared to peer areas within the central Illinois region.

These results are very similar to those found in more recent work done for the U.S. Economic Development Administration (EDA) by the Purdue Center for Regional Development[18]. This analysis found nine industry clusters in Sangamon County with Industry Cluster Establishment Location Quotients (LQ's) of .85 or more, where the total for all industries nationally is 1.00. These are: Agribusiness, Food Processing and Technology (LQ .97); Arts, Entertainment, Recreation and Visitor Industries (.87); Biomedical/Biotechnical – Life Sciences (.96); Business and Financial Services (1.04); Defense and Security (.85); Education and Knowledge Creation (1.08); Information Technology and Telecommunications (.86); Transportation and Logistics (.93); and Printing and Publishing (1.08).

The only major differences between the two more recent cluster analyses are the inclusion of Defense and Security, and Printing and Publishing in the one done for EDA. However, the EDA's Defense and Security cluster includes such public sector establishments as those providing for "Justice, Public Order and Safety Activities", and "Regulation and Administration of Transportation Programs". Both of these are associated with state government activities, particularly the kind one finds in and around a state capital such as Springfield, again demonstrating some of the uniqueness of the region.

The Market Street analysis did not include the public sector as an industry cluster grouping in its analysis as its focus was on private sector enterprises. In addition, the Printing and Publishing enterprises considered in the EDA grouping would be considered as being a part of the business and professional services grouping in the Market Street analysis as well as the 2002 City of Springfield one.

The matters noted above, which demonstrate a relatively self-contained regional economic base exacerbated by declines in state government employment (which will be discussed further, below), have made for a less than optimal diversification of the regional economy both in

terms of industry mix and its locational diversity, additionally defining the region economically.

Related to the industrial diversity of the region, the recent work by the SSCRPC, mentioned above, to study the resiliency of the metro area's (MA) economy using an index of factors developed by the Buffalo Regional Institute of the State University of New York[19] allowed the SSCRPC to score the economic diversification of the Sangamon County metropolitan area (which includes the entirety of the county) against a national norm as well as four central Illinois peer metro regions (Bloomington-Normal, Champaign-Urbana, Decatur, and Peoria).

TABLE 2.1: Regional Economic Capacity Diversity Index (National Index = 1.00)

Metro Area	Economic Diversification Index for Metro Area
Bloomington – Normal MA	+0.21
Champaign-Urbana MA	-0.62
Decatur MA	-0.82
Peoria MA	+0.36
Springfield MA	***-2.54***

As indicated in **Table 2.1**, above, the study found that the Springfield Metro Area scored lowest in economic diversification among the areas compared, where an index of 1.00 represents the national index. A negative number represents economic diversity in the MA below the national average, while a positive number represents diversity above the national average.

As one can see, the Springfield MA falls well below its central Illinois counterparts as well as the national average for the diversity of its economic base**.** This helps explain why other, broader geographic approaches to defining the labor market area tend to mask the unique situation one encounters in this area. For example, private sector regional market outlooks (which often combine the Springfield market area with those of Champaign, Decatur and Peoria) seldom demonstrate the results indicated above, as the Springfield area's lack of economic diversity is often hidden in the diversity of the larger area studied.[20]

This result has been demonstrated in other ways as well.

Economic diversity often demonstrates itself in the capacity of an area to innovate given the relationship between diversity of its business activity and the need for innovation in the local marketplace. The U.S. Economic Development Administration provides an Innovation Index which is an overall measure reflecting a region's capacity for economic innovation and activity.[21] One of the measures of activity provided by this index is a measure of how dynamic and interacting a region's economy is, with an index of 100 representing the average for all regions. *Using this tool one finds the Sangamon County economic area to have an economic dynamics index of 77.7, or almost 22 points below the national average.*

The nature of the business and industry groupings currently existing within Sangamon County demonstrate the nature of the region's economy as a relatively self-contained one, which must be considered in local economic development planning.

Labor Commuting Patterns

The rationale for limiting this review only to the bounds of Sangamon County is also demonstrated by worker commuting patterns, which are critical to regional economic development planning. U.S. Bureau of the Census data for 2000 provides a starting point for the analysis of current and future worker commuting flows in Sangamon County. This data relates to domestic commuting of workers over 16 years of age. **Table 2.2**, below, shows that in that year – the last year for which this information was provided by the Bureau of the Census by means other than survey estimate – almost 95% of those living in Sangamon County also worked there.

TABLE 2.2: In or Out of County Locations of Work in 2000

Workers Living in County in 2000	Number	Percentage
Total	96,450	100%
Working in County	91,314	94.7%
Working Elsewhere	5,136	5.3%

Recent data drawn from the U.S. Bureau of the Census' American Community Survey (ACS) shows this trend continuing. It estimated places of work for Sangamon County residents 16 years-of-age and older for 2008 through 2012. This estimate found that 94.1% of this group (91,293 Sangamon County residents) worked in Sangamon County, while 5.5% (5,340) worked outside the County, and 0.4% (437) did their work outside the state.

The Springfield-Sangamon County Regional Planning Commission (SSCRPC) looked at more recent data[22] that takes into account changes in regional commuting patterns that may have occurred since the 2000 Census due to the recent national economic downturn as well as due to reductions in State government employment. The SSCRPC was interested in this data as a means of determining the extent to which Sangamon County residents may now [23]need to commute outside the County for employment and any limitations this may

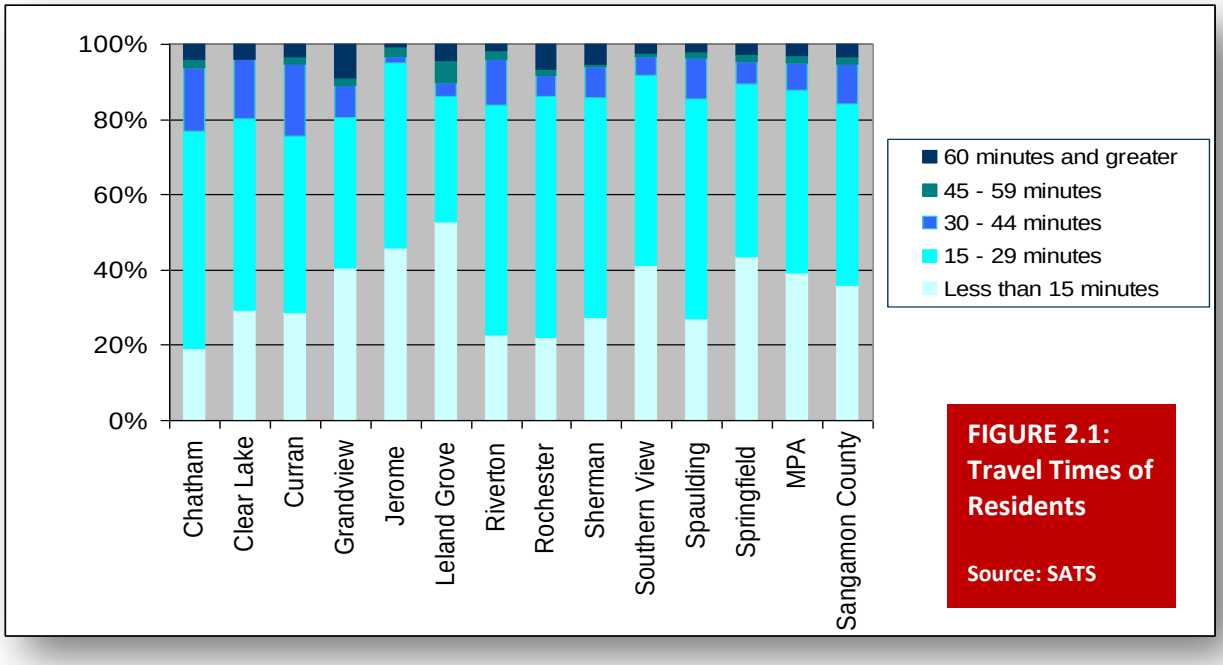


FIGURE 2.1: Travel Times of Residents

Source: SATS

suggest for those in-commuting.

Based upon past study[24], the SSCRPC estimated that commuting times of more than 34 minutes tended to demonstrate a commute to employment outside the identified economic area, while commuting times of less than this amount indicated commutes to employment within the economic area. The SSCRPC found that over 78% of workers aged 16 or more, who do not work from home, continue to commute to jobs in the Sangamon-Springfield economic area based upon their average travel time to work.

This is additionally demonstrated by an analysis the SSCRPC conducted for the Springfield Area Transportation Study (SATS), the state and federally designated Metropolitan Planning Organization for transportation planning in the region. Again based upon U.S. Bureau of the Census data, SATS considered travel time to work for residents in the region age 16 and over who do not work from home. This is demonstrated in **Figure 2.1**, on the preceding page.

Over 80% of those living in the region commute less than 29 minutes to work. The SSCRPC sees those who travel within the 0 to 29 minute classification as being workers travelling to employment within the economic area. Please note that county-wide, almost 40% commute less than 15 minutes to work.

Above comment was made that a large number of workers commuting into the economic area in the past was made up of those working for the State of Illinois in the Springfield metro area. For example, Illinois Department of Employment Security data continues to indicate that a palpable number or workers in Sangamon County do commute in from other counties.[25]

Based upon 2006 – 2010 ACS data, of the 110,860 who work in Sangamon County, 89,898 live *and* work in the County (81.1%), while 20,528 (18.5%) commute in from another Illinois county. A total of 434, or less than .5% of workers in Sangamon County, commute from another state, the largest group (100 workers) commuting from Missouri. This is particularly noteworthy given the effect that high speed rail may have on out-of-area worker commuting patterns.

Along with this IDES data, past analysis based upon no-longer available U.S. Internal Revenue Service data indicates that this flow from other Illinois counties into Sangamon is quite broad (including workers from as far away as Cook County) and largely due to state government employment and business activity associated with it.

However, state employment in the Springfield-Sangamon County economic area has significantly declined in recent years. As **Table 2.3**, below, indicates, State government employment in the Springfield MSA significantly declined from 1990 to 2010 based upon an estimate provided by IDES[26]. *This represents an estimated decline of 5,900 State jobs (25.3%) in the area over a 20-year period.*

More recent figures from the same source do show an up-tick in state government employment in the area, but this growth has been minimal, with 17,500 state employees estimated in 2011, 17,600 in 2012, and 17,700 in 2013. However, and given current revenue conditions at both the State and Federal levels, the longer trend is not expected to be reversed in the near future and may worsen, further limiting job seeking in-migration from surrounding areas. We believe it is important to

note that the trend toward declining public employment is not limited to Illinois or the Sangamon economic area, but is one being seen nation-wide and has been occurring for many years.

This is also represented in a decline in total labor force in the region. The 2013 U.S. Bureau of Labor Statistics report on labor force in Sangamon County found that total labor force declined 2.3% over the preceding 5 years, with a total employment loss of 4.5% over the same period. This indicates that even though unemployment rates have improved, they have not made up for the total number of jobs needed by those in the workforce as well as those newly entering the workforce during this period. Labor growth and loss will be addressed more fully in a later section of this report.

To the extent that the Sangamon economic area has in the past interacted economically with surrounding areas due to state government purchasing and employment, this data provides another factor as to why the region selected for this analysis only addresses activity contained within the bounds of Sangamon County.

The ability of workers to get to jobs in the region was another factor in its selection. The importance of transportation to job growth in the region was demonstrated in a 2010 study conducted for the SSCRPC as it looked at ways to stimulate job growth and diversify the regional economy[27].

TABLE 2.3: Estimated State Government Employment in the Springfield MSA by Year

Year	State of Illinois Employment in MSA
1990	23,300
1991	23,300
1992	21,700
1993	21,800
1994	21,700
1995	21,700
1996	21,700
1997	21,800
1998	21,700
1999	20,800
2000	19,700
2001	20,000
2002	20,000
2003	17,300
2004	17,200
2005	17,200
2006	17,100
2007	17,300
2008	17,300
2009	17,400
2010	17,400

As previously noted, over 80% of County residents work within it, and as **Table 2.4** shows, a similar percentage provides its own transportation. This table indicates that most workers in the region tend to drive to work using their own vehicle, with over 90% of workers in the economic area estimated to have either driven alone to work or carpooled based upon 2008 to 2012 data[28].

However, for those without the use of a vehicle an extensive public transit system is available and is expanding within the region.

TABLE 2.4: Means of Transportation to Work in LLMA

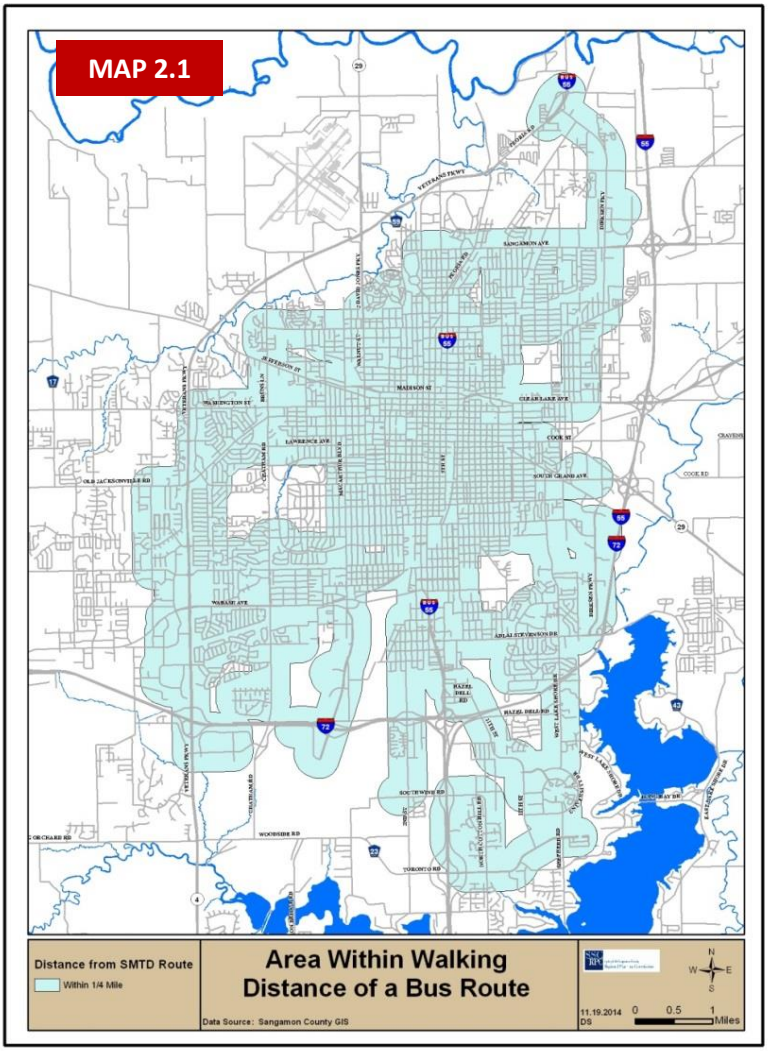
	Number of Workers 16 Years and Older	Drove Alone	Carpooled	Public Transit	Walked	Other Means	Worked at Home
Total	71,091	57,610	7,105	1,510	1,571	852	2,258
% of Total	100%	81%	10%	2%	2%	1%	3%

Within the metro area the Springfield Mass Transit District (SMTD) serves as the designated

provider of public transportation. The 2010 Census indicated that there were 120,125 people living within the SMTD boundary, or over 60% of the total 2010 population in the region. The District provides service to most major residential and employment areas within its boundaries, with 97,390 people covered within ¼ mile of an SMTD route[29]. The ¼ mile distance is most often used for planning purposes as it represents a normal five-minute walking time. This represents nearby access to public transit by nearly 50% of the economic area's population, and as **Map 2.1**, below, showing SMTD route coverage, indicates, these routes cover the vast majority of the most densely populated urban area.

The District is served by 17 regular daytime service routes, a special Historic Sites Route, and a Saturday only route to the Southwind Park area. All of these daytime routes currently originate and terminate at a downtown on-street transfer center located near the intersection of 5th Street and Capitol Avenue. Ultimately this transfer center will relocate to a new multi-modal center that will also provide access to high speed passenger rail.

An additional 16 supplementary service routes provide limited service Monday through Friday, providing additional access to public transit for workers.



Supplementary service routes exist on heavily traveled fixed route corridors during peak periods and provide transit to and from places that generate large numbers of passengers at specific times, but are not typically serviced by fixed routes. These supplementary service routes originate and terminate at various locations throughout the District.

The District also operates five separate transit routes on weeknights. Nighttime routes originate and terminate at an on-street transfer center on Washington Street between 5th Street and 6th Street to the north of the Old State Capitol in the city-center. Day service operates Monday through

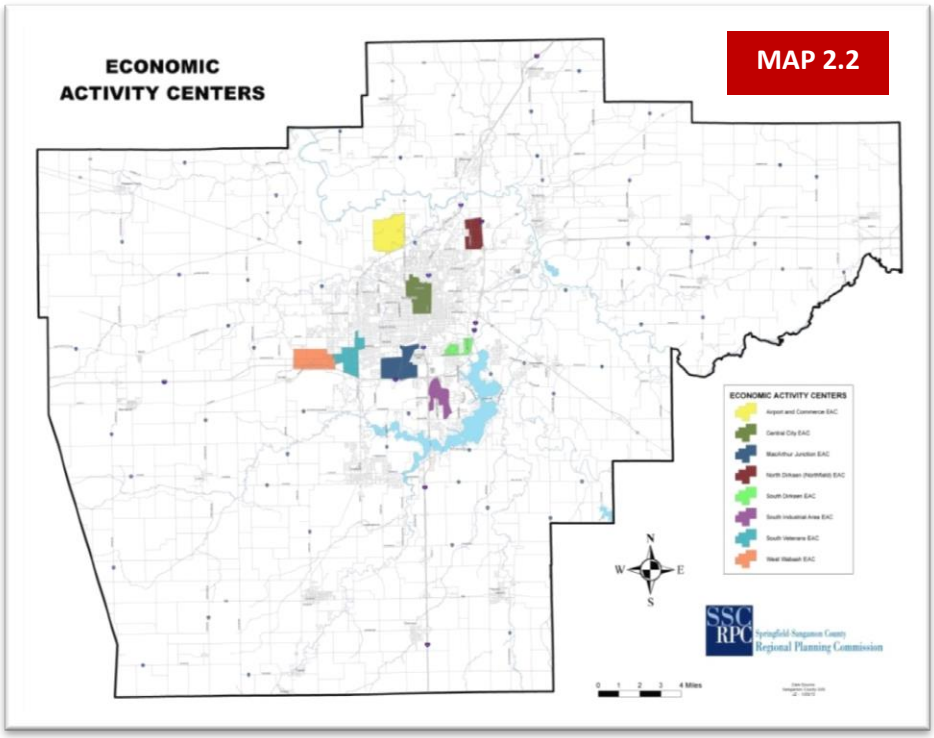
Saturday from 6:00 AM to 6:00 PM and night service operates from 6:45 PM to 11:30 PM Monday through Friday. All SMTD buses are wheelchair accessible and include front mounted bicycle racks that can accommodate up to two bicycles at a time.

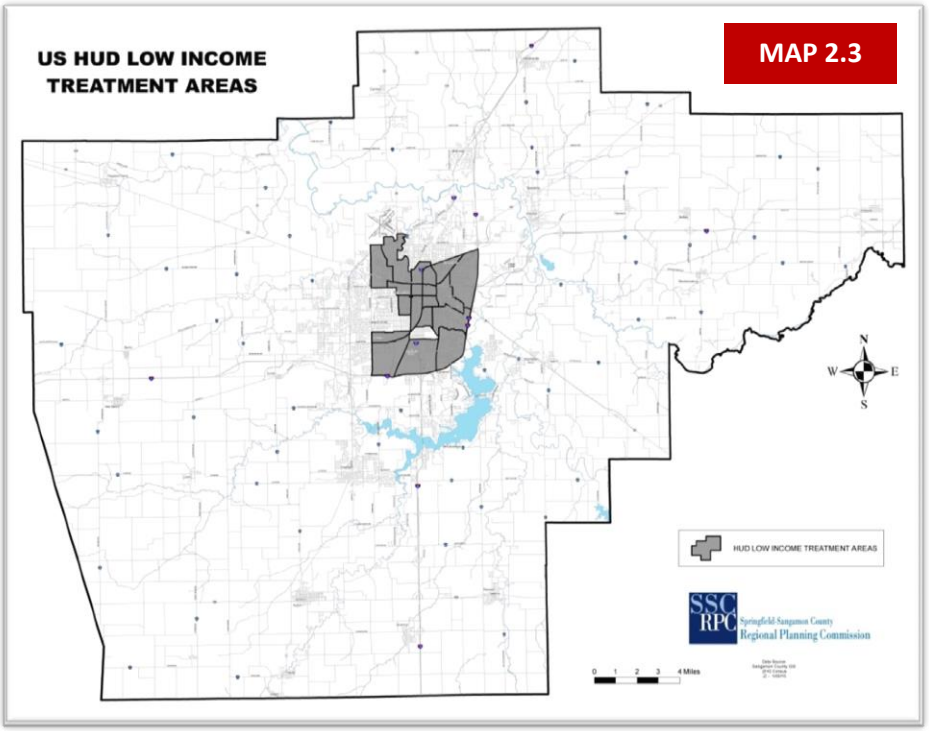
Starting in 2015, those outside the SMTD service area –particularly those in less densely populated and more rural areas -- will be served by the Sangamon-Menard Area Transportation System (SMART). SMART is a joint, low-cost, on-call transit system established by Sangamon and Menard counties to serve the population living outside the urban area. As an on-call system, SMART is organized such that passengers using that system will have access to SMTD buses within the SMTD service area.

The interconnection between the SMTD and SMART transit systems will provide significant transportation support for those in the economic area needing public transit to move from home to work.

Special and Interconnected Development Needs…and Opportunities

The Sangamon economic area also includes several geographic locations identified as *Economic Activity Centers* (EAC's) connected by critical transportation and economic corridors (see **Map 2.2**). While it is intuitive to think of Springfield as the major economic center in the region -- with some collar communities providing secondary centers of commercial growth -- economic development planning must also consider subareas within the region that currently serve as job generators and have the locational potential for additional business growth. That is the purpose for activity center identification as they represent the foci for potential job growth.





The EACs were identified through a 2010 SSCRPC funded study as areas having significant business growth and job generation potential, as well as having key transportation corridors connecting them that offer additional opportunity for business growth as well[30].

The EACs represent an opportunity to foster economic development and job growth in a more geographically and industrially targeted way, taking into account marketplace conditions, existing infrastructure, established industry sectors, and proximity to properties currently zoned for industrial use. The EACs identified here may be thought of as "micro-economic" hubs within the Springfield-Sangamon County economic area that are reflective of the economic realities of the region as a whole and, if additionally developed, would further encourage development throughout the region.

While it is the past stability of the regional economy that has offered some measure of security within the County, it is also true that a higher degree of diversity and interconnectivity between and among the "micro-economies" in the region across local government jurisdictional lines will foster further growth, helping to resolve other economic issues. The reader should, for example, also note the inter-connecting relationship between the EACs and the U.S. Department of Housing and Urban Development (HUD) "treatment areas" (see **Map 2.3**). These treatment areas include census tracts with high percentages of low income populations, meaning that they have special and critical economic development needs.

Additionally, and for economic development planning purposes, attention should be given to two locations outside of Springfield that have been identified by the County as offering additional development potential. These sites are identified here as *Special Redevelopment Areas* (SRAs).

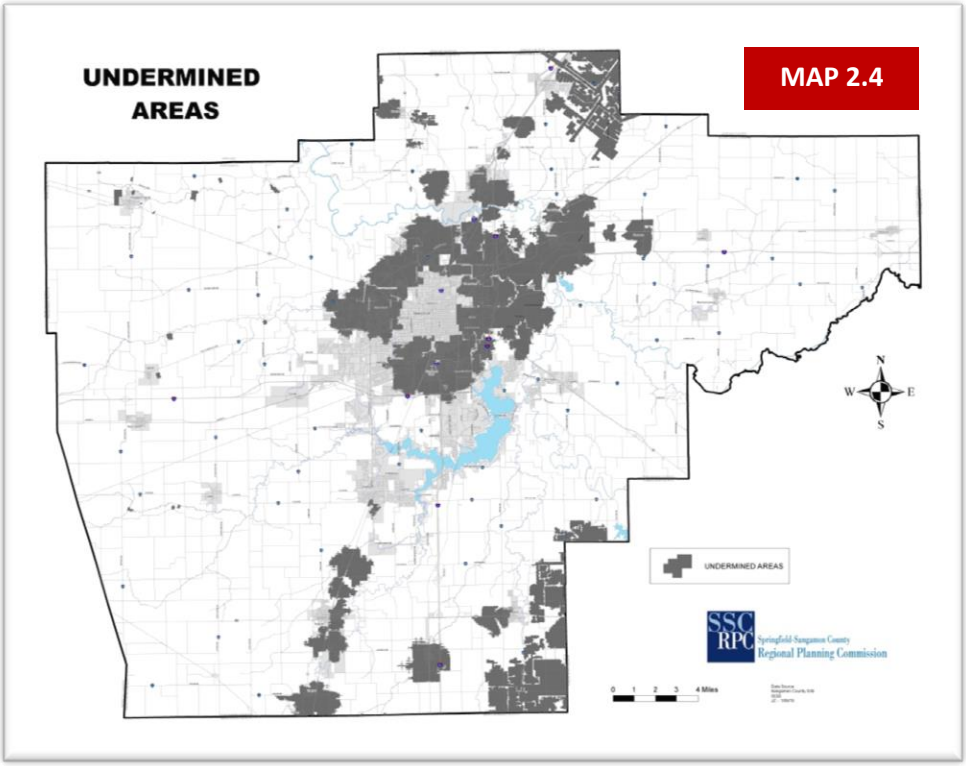
One SRA lies to the north in unincorporated Sangamon County near the Village of Williamsville. It is the existing site of the Viper Coal Mine. While Sangamon County hosts a number of closed and/or abandoned coal mines, this is a large underground operating mine. Coal mining has been under significant economic and regulatory stress in Illinois, but the Viper mine controls approximately 25.2 million tons of coal reserves, plus an additional 38.5 million tons of non-reserve coal deposits. All of the coal is processed at Viper's

preparation plant and transported to utility and industrial customers located in north-central Illinois. Shipments to electric utilities account for approximately 58% of this mine's coal sales, making it a significant economic asset to the area. It is anticipated that this facility will need various upgrades and assistance to continue its operations and the jobs it maintains, and the location provides potential opportunities for non-coal related and spin-off development. It has been identified as a possible area for future agri-business facility growth, which will be addressed additionally below.

We draw attention to the undermined areas show in **Map 2.4** as they create a potential barrier to development in the economic area since undermined areas offer the potential for mine subsidence. This creates an additional risk and potential cost to this land being used for manufacturing or other commercial purposes where subsidence can affect the fine tolerances of industrial machinery or even the automated racking systems used in some warehouses.

An additional SRA also lies in unincorporated Sangamon County to the east near the City of Illiopolis, and is the previous site of the Formosa Plastics Company. This company ceased operations in the area due to an explosion that occurred at its polyvinyl chloride production unit in April 2004. This vacant site provides an opportunity for industrial development, particularly given its location near I-72 and its existing access to rail. This area is also seen as a potential site for agri-business facility development.

The importance of the agri-business sector – inclusive of facilities engaged in the manufacture and distribution of farm equipment and supplies, or the processing, storage, and distribution of farm commodities, or the processing, production and bulk storage of food products for consumption -- to the long term economic growth of the area was identified in the recent Sangamon County Regional Strategic Plan, which focused on the development of a "vital cycle" for the region that would encourage and sustain development success, and the inter-connected nature of the communities within



the region.[31]

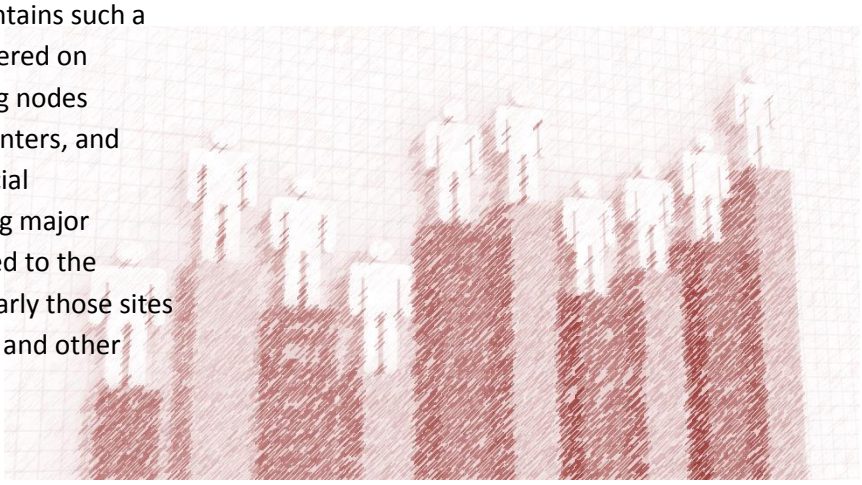
We draw particular attention to the relationship of all of the local areas discussed above to the major transportation corridors in the economic area connecting them; including primary agricultural corridors.

Transportation corridors are receiving a growing level of attention in economic development planning as both research and experience suggest that economic development tends to occur around business and industry nodes as well as along the transportation corridors that connect them[32]-[33]. This is because the corridors benefit the hubs as they most often lie at the intersection of economic, demographic and geographic spaces, performing both market-serving and market-connecting functions.

They can also often provide an important link between the outlying economic nodes in less urban areas and the major transportation hubs or gateways usually centered in the urban landscape of mid-tier cities such as Springfield[34]. For this reason the presence of a transportation hub or gateway in an urban area has been found to better help define the economic area than employee commuting patterns alone, as it is vital to the economic dynamics of the area.

The Sangamon economic area contains such a transportation gateway/hub centered on Springfield, along with the existing nodes identified as Economic Activity Centers, and potential nodes identified as Special Redevelopment Areas. All lie along major transportation corridors connected to the Springfield gateway/hub, particularly those sites most amenable to manufacturing and other industrial development.

The transportation corridors and the urban centered hub in the economic area provide a geographic structure for economic development planning as the corridors allow for a focus for development along them and between and among the low income areas, the identified Economic Activity Centers, and outlying Special Redevelopment Areas, creating the potential for greater development synergy affecting each.



3. The Influence of Population Trends on the Springfield-Sangamon County Economic Area

Why Population Growth Matters

The extent to which changes in population – particularly growth or decline – influence economic growth is among the oldest debates in economics, dating back at least to Malthus. The fact that populations and economic output tend to grow together is well documented, but that correlation does not demonstrate a clear causal relationship as researchers have found many confounding variables involved.[35]

However, it is somewhat intuitive that there is at least some causal relationship between population growth and economic growth at the micro level, as a business with a flat or declining customer base must sell more products to a smaller customer base to be successful. On the macro level, one might make the gross assumption that as the population grows more consumers enter the market place, additionally stimulating market demand.

To place this in a local economic development context, some analysts have argued that the real estate growth (housing, commercial and industrial) that arises from increasing population growth, and which also encourages additional spending for the infrastructure that must be developed to support it (transportation, sewer, electricity, etc.), represents 35% of the economy's asset base.[36] In the absence, then, of population growth, this asset does not grow.

It is also intimately related to the provision of governmental services. Since the bulk of local government funding comes from property and sales tax revenues, the extent to which these revenues grow or decline directly affects the ability of the local units of government to provide services and maintain infrastructure. To the extent that population growth leads to increased property values and more taxable transactions in the market place, it has an effect on furthering additional population growth as it allows the jurisdictions to provide the services, infrastructure and public amenities current and potential residents find appealing.

Population growth or decline, and the speed and intensity thereof, can also have other effects on the economy. For example, some economists argue that the sluggish economic recovery following the "Great Recession" is partially due to slow population growth since that time.[37]

Stock and Watson, for example, specifically cite such demographic trends as the plateauing of female labor force participation rates, the aging of the population, and the distribution of workers by age (due to the ageing of the Baby Boomers), as a cause for the slow recovery from the most recent downturn. They also contend, looking at the long-term demographic data, that these will likely be causal factors slowing recovery from future downturns.[38]

Population growth and various elements associated with it are therefore considered important in the SSCRPC's analysis of the long-term trends in the economic area because such growth is not only an indicator of economic success, but a potential factor in it.

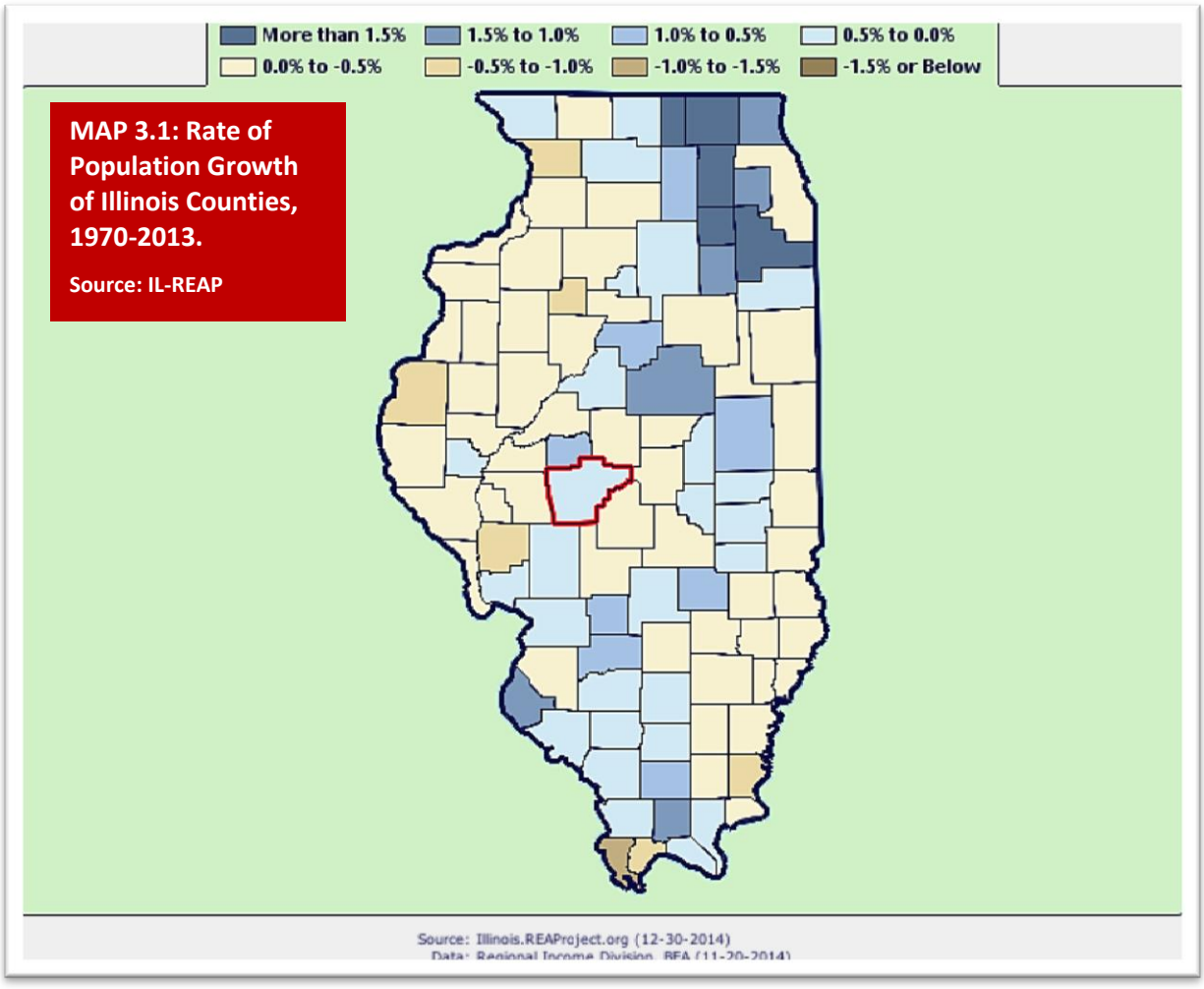
Population Growth in the Economic Area

Differentiating between the *size* of an area's population and the *rate* of its growth is important in assessing its economic dynamics, for while a population may grow in total numbers, the rate at which this growth occurs is of particular importance for planning.

As the SSCRPC noted in its most recent study of the population characteristics of the county[39], Springfield, Sangamon County, and Illinois have all experienced a wide range of population growth rates since 1850. This range in rates over time is widespread, as in recent decades mid-size Illinois counties similar to Sangamon have also shown considerable variation in growth rates.[40]

Map 3.1 indicates the rate of population growth in Sangamon County compared to rates of growth in counties state-wide from 1970 to 2013. The reader will note that the growth rate for our area places it toward the upper middle of the group. This has been changing somewhat in more recent years.

Considering the rate of population growth in the economic area, it has been relatively stable since 1990 following higher rates in the preceding 20 years.



MAP 3.1: Rate of Population Growth of Illinois Counties, 1970-2013.

Source: IL-REAP

TABLE 3.1: Springfield and Sangamon County Population in Historic Perspective

Year	Springfield Population	Springfield Increase from Prior Decade	Sangamon County Population	Sangamon County Increase from Prior Decade
1970	91,753	10%	161,335	10%
1980	100,054	9%	176,070	9%
1990	105,227	5%	178,386	1%
2000	111,454	6%	188,951	6%
2010	116,250	4%	197,465	5%

TABLE 3.2: Average Annual Percent of Change in Population Growth in Sangamon County and Ranking of Change Compared to Other Illinois Counties, 1970-2013 Source: IL-REAP

	1970-2013		1970-1979		1980-1989		1990-1999	
	%	Rank	%	Rank	%	Rank	%	Rank
Sangamon	0.50	20	0.95	31	0.08	22	0.62	24
	2000-2009		**2010-2013**		**2013**			
	%	Rank	%	Rank	%	Rank		
Sangamon	0.38	24	0.38	8	-0.06	24		

As shown in **Table 3.1**, one notices a decline in the rate of growth in Springfield and Sangamon County between 2000 and 2010 even though the population has grown overall.

The population in the economic area increased at slighter rates in the last three decades than it did in the prior two, suggesting that the economic area's rate of population growth is trending downward. This trend appears to be continuing, with a recent study of the housing market suggesting a rate of only 2.2% in the metro area by 2015.[41] *If so, this will represent a decline in growth rate of almost two-thirds between the 2000 census and the 2015 projection.*

Another way to look at this data is to consider the ranking of the county by rate of change. **Table 3.2** provides that information along with the ranking of the county against other Illinois counties in terms of that comparative rate. Particular attention should be given to the periods 2000-2009 and 2010-2013. The rate of growth during these periods remained the same (0.38%), but the rankings of this change were far different: a 24 rank during the first period and an 8 ranking during the second. However the data indicated a negative rate of growth for 2013 alone.

As shown in **Table 3.3**, this is in contrast to some peer counties that continue to see more robust growth.[42] Of the six counties selected for this comparison, three have grown at a faster rate than Sangamon, and three slower. This may simply be representative of the unique stability of this economic area – as mentioned earlier -- however one person's "stability" may simply be another's "stasis". To the extent that economic growth is intertwined with population growth, a smaller and slower growing population base is limiting. It should not be a surprise, then, that the two counties experiencing the highest

TABLE 3.3: Population Growth in Sangamon and Selected Illinois Counties, 1990-2010

	Population			% Change
County	**1990**	**2000**	**2010**	**2000-2010**
Sangamon	178,386	188,951	197,465	4.5%
Champaign	173,025	179,668	201,081	11.9%
McLean	129,180	150,433	169,572	12.7%
Macon	117,206	114,706	110,768	-3.4%
Peoria	182,827	183,433	186,494	1.7%
Rock Island	148,723	149,374	147,546	-1.2
Winnebago	252,913	278,418	295,266	6.1%
Illinois	11,430,602	12,419,293	12,830,632	3.3%

rates of population growth are also two that are generally thought of as strong economic actors: Champaign and McLean. It may also explain why the counties that lag greatest in population growth are those most often found to be economically stressed.

It appears to the SSCRPC that there is a relationship between population growth and economic growth, although the causal relationship is unclear: is population in these areas growing because of improved economic conditions, or is the population growth contributing to improved economic conditions, or both? No matter the answer, as IL-REAP suggests concerning the relevance of population growth to economic development[43]:

> *"Attracting and retaining people to live, work, raise a family, and retire underlies the economic vitality of any region. Population growth is both a cause – and a consequence – of economic growth. Patterns of population growth and change reflect differences among regions to attract and retain people both as producers and consumers in their economy."*
>
> ***IL-REAP***

Aging of the Workforce

While the raw number of those in the economic area is important in crafting an economic development plan and strategy, the age of that workforce is equally important. Typically attention is given to three groups: those 18 and younger (who are not considered old enough to be a significant component of the workforce), those 65 and older (who are most often considered to be of retirement age and, therefore, not a significant component of the workforce), and those between those ages, those 19-64 years-of-age (who are considered to be the predominate demographic component of the workforce.) It is relevant, then, to consider that portion of an economic area's population – those 19 to 64 – in order to determine how much it can contribute to the labor pool.

Like other areas in our state and nation, increases in median age over the last several decades have been heavily influenced by the aging of the "Baby Boomers". In general terms, this is the age cohort born between 1946 and 1964, making up a significant percentage of both the general population and that part of it considered to be in the workforce.

By the 2010 census, the Baby Boomers made up those in the 45-64 age group and were a significant portion of the workforce. For the purpose of comparison, this same group was in the 18 and under age cohort in 1970. From 1970 to 2000, this group shifted from under 18 to being middle-aged. For this reason, we believe particular attention should be paid to the influence the Boomers will have on the workforce in the economic area as they age.

TABLE 3.4: Population of Workforce Age in Springfield and Sangamon County, 2000-2010

	Sangamon County		Springfield	
AGE GROUPS	**2010 Population and Percentage of Population**	**2000 Population and Percentage of Population**	**2010 Population and Percentage of Population**	**2000 Population and Percentage of Population**
19 Years and Younger	51,641 (26.15%)	51,602 (27.37%)	29,618 (25.48%)	29,322 (26.31%)
20 to 64 Years of Age	118,462 (59.99%)	111,824 (59.31%)	70,044 (60.25%)	66,035 (59.25%)
65 Years and Older	27,362 (13.86%)	25,110 (13.32%)	16,528 (14.22%)	16,095 (14.45%)
Total	197,465	188,537	116,250	111,454

Table 3.4 provides a breakdown of the Springfield and Sangamon County populations in 2000 and 2010 by three age groups: those 19 and under, those 65 years and older, and those between 19 and 65.

The reader will note the slight decline of the 20 to 64 age group in the 2010 census compared to the 2000 census for the county as a whole, at the same time there was a slight increase in Springfield. *But what is more informative is that there was also a decline in the number of those in the 19 and younger age group in both the city and the county. This is important as this is the cohort that will ultimately move into the workforce in* future *years.*

It is important for another reason as well. For economic development planning purposes another useful way to consider age data is to consider the "dependency ratio"[44]. Age dependency ratios represent the percentage of residents that are either children (0-18 years), elderly (65 or more years), or both as a component of the general population as compared to the population of working age (19-64 years), as the first two groups are considered "dependent populations". Dependency ratios for Sangamon County compared to Illinois are shown in **Table 3.5.** *These ratios suggest that the population of working age has an unusually high portion of dependent population it supports in the local economic area compared to the state as a whole.*

TABLE 3.5: Dependency Ratio for Economic Area Based Upon Population Age Groups

	Sangamon County	Illinois
Child Dependency Ratio	41.8	38.7
Older-Age Dependency Ratio	24.4	19.9
AGE DEPENDENCY RATIO	66.4	58.6

As the SSCRPC reported in an earlier study of the region's population[45], these ratios are not a perfect metric because some residents work prior to age 19 and after age 65. However, they do provide a simple and useful representation of the potential impact that age distribution may have on the economic well-being of the economic area. This is because increases in the proportion of older and younger populations in an area can place additional demands on health care, social, and educational services. This, in

turn, reduces the financial resources that governmental bodies would have available to address various barriers to economic growth (e.g., public infrastructure, business capital, housing rehabilitation, etc.). This is particularly true in a scenario where the economic base of those in the labor force is not robust enough to support these service levels.

Effect of In- and Out-Migration

Of course, the local population does not expand or decline solely due to its native birth and death rates, but is affected by shifts in population as well. These shifts can occur within an economic area – existing residents simply moving from one part of the area to another – but more importantly can include new residents moving into the area while current residents are moving out of it.

For this reason it is important to consider the net effects of in- and out-migration in the Sangamon economic area. The net in-migration effect is arrived at by subtracting the number or residents leaving the area from those moving in to it. If more move into an area than leave it, the result is a net increase in the resident population.

Work done by the SSCRPC as part of the regional transportation planning process, found that *the area has been the beneficiary of net in-migration over the years, but that this increase was a relatively small component of overall population growth.* To determine the effect of population migration on future regional growth patterns, the SSCRPC projected population growth to 2040, working from the 2010 population base. The results of this work are shown in **Table 3.6**.

Overall, the SSCRPC found that the population of the economic area would grow by 41,277 over the 30-year period studied. This would increase the area's population by about 21%, but would only account for 1,376 per year on average. Approximately 6.8% of population growth over the 30-year period would be due to net in-migration. Another way to look at this is that net in-migration will add slightly more than 541 residents per year on average over this period compared to 1,376 per year growth for the native population. This is, of course, preferable to a net loss in population due to out-migration, and speaks well of the region's ability to hold its population while attracting some new residents, but will not make up for the loss of the Baby Boomer cohort.

TABLE 3.6: Population Migration in the Economic Area, 2012 to 2040

	2010 Population	2040 Native Population Projection (Births Minus Deaths), No Migration	2040 Native Population Projection, Plus In- and Out-Migration
Sangamon County	197,465	222,505	238,742
Net Increase Due to In-Migration: 2010-2040			16,237
Net Increase Due to Native Population Growth: 2010-2040			25,040

Of course the strongest magnet for the in-migration of population is job growth and availability. To the extent that the region should desire and seek additional population growth,

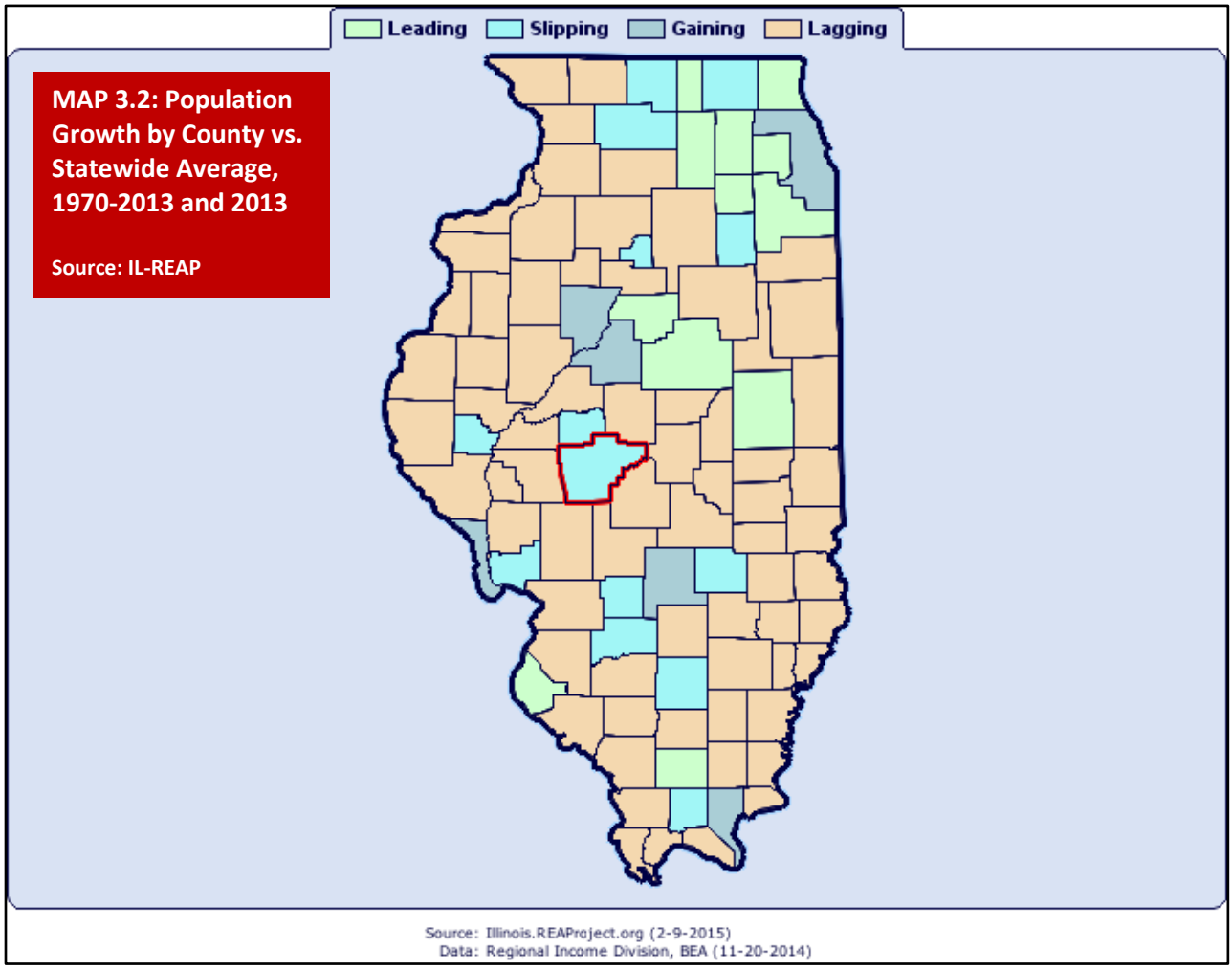
the continuous expansion of its employment base is a critical component.

The Long Term Population Pattern and Current Status: "Slipping".

To assess long term trends and current status, the SSCRPC turned to a form of analysis provided by REAP. That method borrows from an approach sometimes used to compare and assess the market performance of individual securities across industry sectors: the *Leading, Slipping, Gaining, Lagging* (or, LSGL) Analysis. LSGL is seen as a useful and versatile way to "compare, portray and classify" factors associated with economic growth, such as population growth across all of Illinois' 102 counties. LSGL analysis will be applied in other sections of this report as well.

In this particular case, LSGL was used to review Sangamon County's population growth trends since 1970 compared to the other counties, as well as those trends compared to the latest available year: 2013. The results of this analysis are shown on **Map 3.2** in terms of whether or not a county's population growth is seen as Leading, Slipping, Gaining or Lagging.

Leading counties are those whose average annual population growth rate surpassed the statewide average both long-term (0.35%) and near-term (0.11%). *Slipping counties* are counties whose long-term average annual population growth rate exceeded the statewide average (0.35%), but whose near-term growth



has "slipped" by falling below the Illinois average (0.11%). *Gaining counties* are counties whose long-term average annual population growth rate fell below the statewide average (0.35%), but whose near-term growth has "gained" by registering above the average (0.11%) statewide. *Lagging counties have* average annual population growth rates falling under the statewide average both long-term (0.35%) and near-term (0.11%).

Sangamon County's population growth rate of 0.50% surpassed the statewide overall average of 0.35% over 1970-2013, but its -0.06% growth rate trailed Illinois' statewide average of 0.11% over 2013. *Accordingly, Sangamon County is among the fourteen counties REAP classified as* "Slipping" *in that its population growth recorded below the Illinois average in 2013 and its longer-term average posted above that of the average statewide over 1970-2013.*

Figure 3.1 shows the 102 counties of Illinois as dots on a scattergram, with the vertical axis representing the average annual population growth rate over the long-term period (1970-2013), and the horizontal axis representing the population growth rate for the near-term (2013).

This figure sets apart those counties whose long-term population growth exceeded the statewide average of 0.35%, by portraying them in the top two quadrants demarcated at 0.35% on the vertical axis. Counties whose long-term average annual population growth rate trailed the statewide average (0.35%) are distributed in the bottom two quadrants. In all, 26 counties surpassed the statewide average over 1970-2013, while 76 counties fell below.

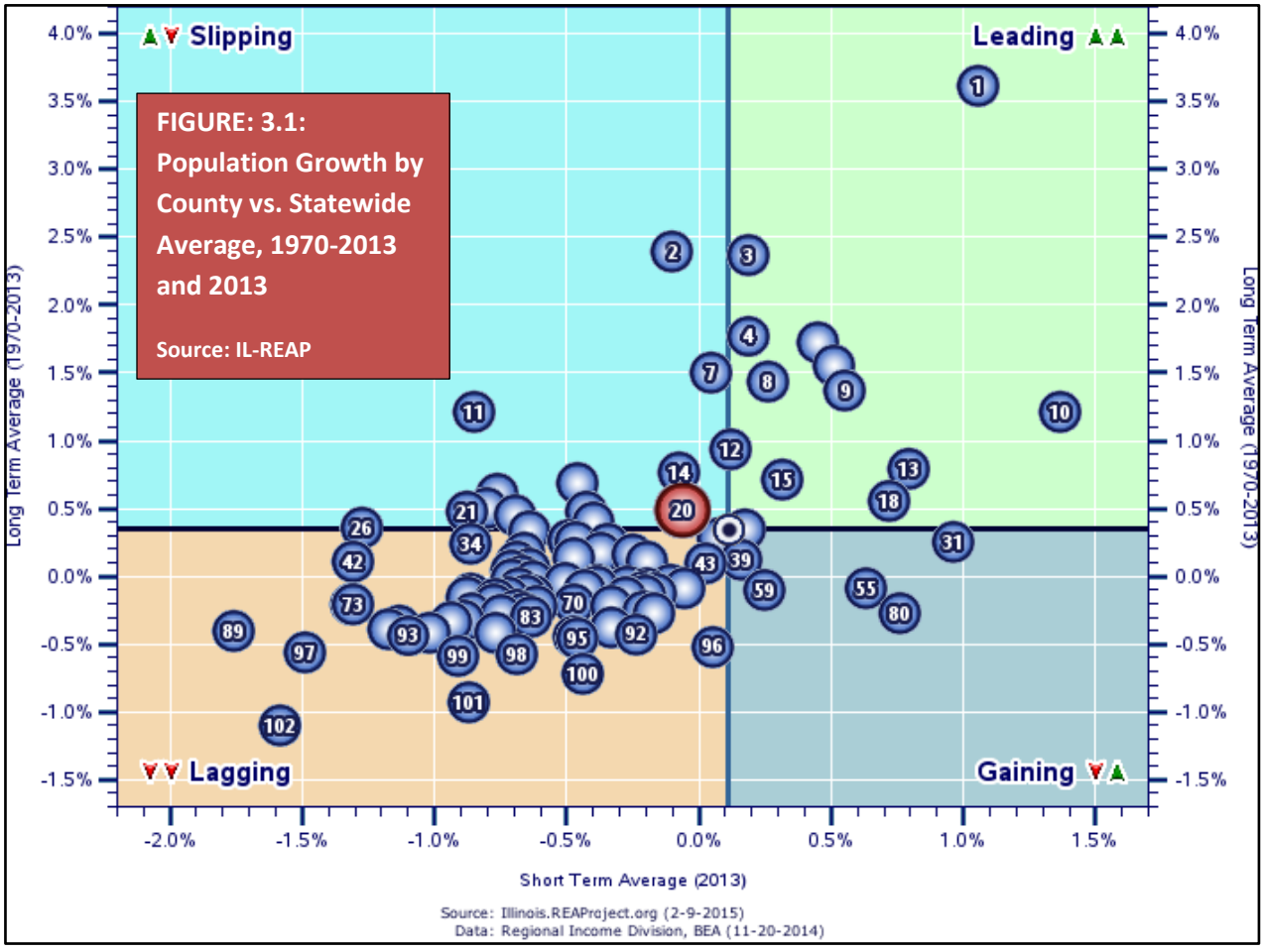
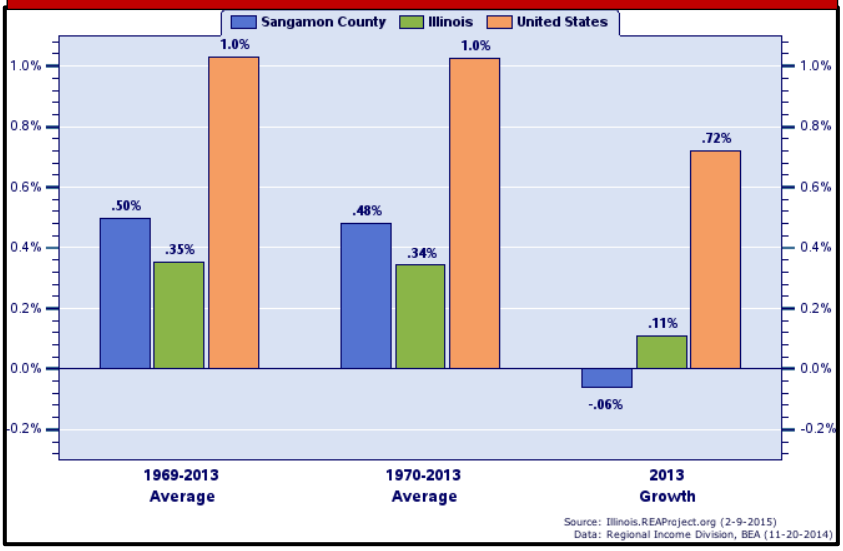


FIGURE: 3.1: Population Growth by County vs. Statewide Average, 1970-2013 and 2013

Source: IL-REAP

Similarly, the two quadrants on the right of this figure present the positions of the 18 counties whose most recent (2013) population growth rate exceeded the statewide average (0.11%). The two quadrants on the left feature those 84 counties whose population growth over 2013 trailed the statewide average. Sangamon is show on the scattergram as number 20.

FIGURE 3.2: Average Annual Percent Change in Population Growth, Sangamon County, Illinois and U.S. Source: IL-REAP



Along with Sangamon, only 13 (14%) other of Illinois' 102 counties are classified as *Slipping*. Those counties ranked by their long-term average include: McHenry (2nd); Clinton (16th); Ogle (21st); Winnebago (25th); Grundy (7th); Menard (17th); Jersey (22nd); Putnam (26th); Johnson (11th); Bond (19th); Jefferson (23rd); Effingham (14th); Sangamon (20th); Brown (24th).

While Sangamon's categorization as Slipping is not as negative as one might suppose it is for a Lagging area, it is still a cause for concern and requires strong consideration in any economic trend analysis addressing population growth. What might be additionally informative is Sangamon's average annual percent change in population growth compared to the state and nation. That is provided in **Figure 3.2**. This graph indicates the degree to which the county exceeded the state growth rates over the 1970-2013 period, but did not keep pace with the nation as a whole. Moreover, it shows the change in rate of growth that occurred in recent years. The question becomes, will this more recent trend continue? This may be resolved by considering the rates of population growth of our three peer counties.

Based upon the LSGL analysis provided by REAL, all three of Sangamon's three peer areas are performing better. Two of these counties are categorized as *Leading* (McLean, 10th; Champaign, 18th), while one is listed as *Gaining* (Peoria, 55th). **Table 3.7** provides this comparison.

Table 3.8, on the next two pages, provides a comparison of Sangamon's growth compared to the state as a whole from 1970 to 2013, using 1970 as an index year. *Again, the population growth outlook for the Sangamon economic area indicate less than positive trends that should be considered as economic development strategies are created*

TABLE 3.7: Sangamon County and Peer Counties Population Growth Compared to Statewide Average and Rankings

County	1970-2013		2013		Population	LSGL Analysis Category
	Avg. % Change	Rank	% Change	Rank		
Sangamon	0.50	20	-0.06	24	199,145	Slipping
Champaign	0.56	18	0.72	6	204,897	Leading
McLean	1.22	10	1.37	1	174,647	Leading
Peoria	-0.08	55	0.63	7	188,429	Gaining

TABLE 3.8: Sangamon County and Illinois Population, 1970-2013 Source: IL-REAP

	Sangamon County				Illinois			
Year	Population	Index Yr. 1970	Percent Change	Percent of Statewide Total	Population	Index Yr. 1970	Percent Change	Percent of Nationwide Total
1970	162,099	100.0	1.09	1.46	11,124,681	100.0	**0.78**	5.46
1971	165,735	102.2	2.24	1.48	11,205,816	100.7	**0.73**	5.42
1972	166,403	102.7	**0.40**	1.48	11,258,111	101.2	**0.47**	5.38
1973	168,271	103.8	1.12	1.49	11,260,248	101.2	**0.02**	5.33
1974	168,971	104.2	**0.42**	1.50	11,273,745	101.3	**0.12**	5.28
1975	173,140	106.8	2.47	1.53	11,306,351	101.6	**0.29**	5.25
1976	176,299	108.8	1.82	1.55	11,360,274	102.1	**0.48**	5.22
1977	177,199	109.3	**0.51**	1.55	11,406,312	102.5	**0.41**	5.19
1978	176,462	108.9	**-0.42**	1.54	11,434,421	102.8	**0.25**	5.15
1979	176,204	108.7	**-0.15**	1.54	11,422,782	102.7	**-0.10**	5.09
1980	176,062	108.6	**-0.08**	1.54	11,434,702	102.8	**0.10**	5.03
1981	175,720	108.4	**-0.19**	1.54	11,443,461	102.9	**0.08**	4.99
1982	175,162	108.1	**-0.32**	1.53	11,423,413	102.7	**-0.18**	4.93
1983	175,971	108.6	**0.46**	1.54	11,408,817	102.6	**-0.13**	4.88
1984	176,144	108.7	**0.10**	1.54	11,412,128	102.6	**0.03**	4.84
1985	176,512	108.9	**0.21**	1.55	11,399,803	102.5	**-0.11**	4.79
1986	175,827	108.5	**-0.39**	1.54	11,387,256	102.4	**-0.11**	4.74
1987	176,187	108.7	**0.20**	1.55	11,391,176	102.4	**0.03**	4.70
1988	177,185	109.3	**0.57**	1.56	11,390,186	102.4	**-0.01**	4.66
1989	177,649	109.6	**0.26**	1.56	11,409,782	102.6	**0.17**	4.62
1990	178,688	110.2	**0.58**	1.56	11,453,316	103.0	**0.38**	4.59
1991	181,315	111.9	1.47	1.57	11,568,964	104.0	1.01	4.57
1992	184,247	113.7	1.62	1.58	11,694,184	105.1	1.08	4.56
1993	186,941	115.3	1.46	1.58	11,809,579	106.2	**0.99**	4.54
1994	189,337	116.8	1.28	1.59	11,912,585	107.1	**0.87**	4.53
1995	189,592	117.0	**0.13**	1.58	12,008,437	107.9	**0.80**	4.51
1996	189,969	117.2	**0.20**	1.57	12,101,997	108.8	**0.78**	4.49
1997	189,638	117.0	**-0.17**	1.56	12,185,715	109.5	**0.69**	4.47
1998	189,441	116.9	**-0.10**	1.54	12,271,847	110.3	**0.71**	4.45
1999	188,957	116.6	**-0.26**	1.53	12,359,020	111.1	**0.71**	4.43
2000	189,152	116.7	**0.10**	1.52	12,434,161	111.8	**0.61**	4.41
2001	189,924	117.2	**0.41**	1.52	12,488,445	112.3	**0.44**	4.38
2002	190,756	117.7	**0.44**	1.52	12,525,556	112.6	**0.30**	4.35
2003	191,339	118.0	**0.31**	1.52	12,556,006	112.9	**0.24**	4.33
2004	191,885	118.4	**0.29**	1.52	12,589,773	113.2	**0.27**	4.30

2005	192,432	118.7	**0.29**	1.53	12,609,903	113.4	**0.16**	4.27
2006	193,317	119.3	**0.46**	1.53	12,643,955	113.7	**0.27**	4.24
2007	194,025	119.7	**0.37**	1.53	12,695,866	114.1	**0.41**	4.21
2008	195,094	120.4	**0.55**	1.53	12,747,038	114.6	**0.40**	4.19
2009	196,180	121.0	**0.56**	1.53	12,796,778	115.0	**0.39**	4.17
2010	197,835	122.0	**0.84**	1.54	12,839,695	115.4	**0.34**	4.15
2011	198,914	122.7	**0.55**	1.55	12,855,970	115.6	**0.13**	4.13
2012	199,269	122.9	**0.18**	1.55	12,868,192	115.7	**0.10**	4.10
2013	199,145	122.9	**-0.06**	1.55	12,882,135	115.8	**0.11**	4.07

1970 = 100 as Index Year
Negative growth years are shown in red. Years with less than 1.0 percent change, are shown in bold.
Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP)
with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1400_100_PSN)

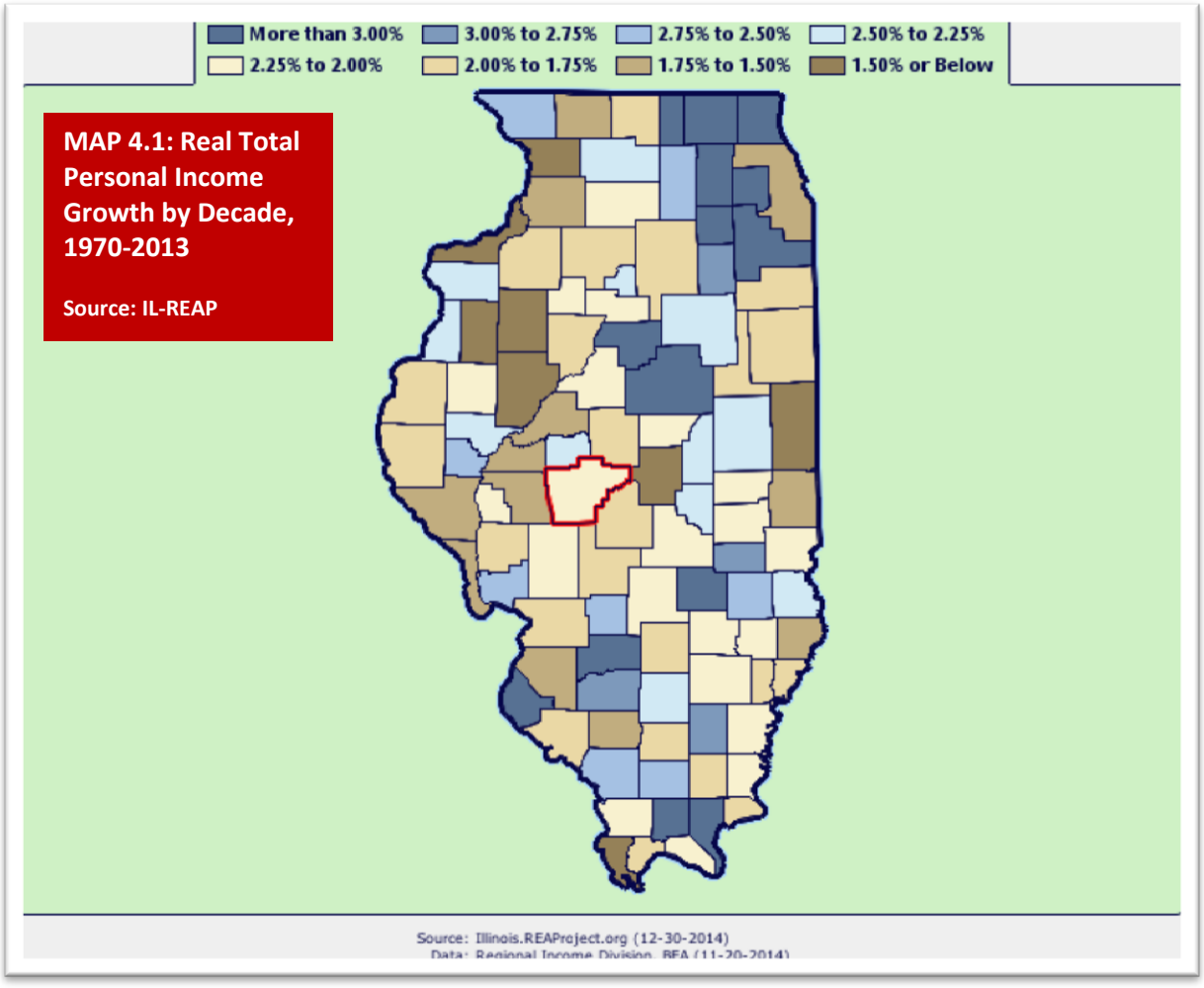
4. Trends in the Growth of Personal Wealth in the Economic Area

If an economic area is successful in the marketplace, its economic success should be reflected in the growth of personal wealth by the residents of the area. For this reason factors such as *personal income growth* and *per capita income growth* are often used as indicators of local economic stability and strength.

Personal Income Growth

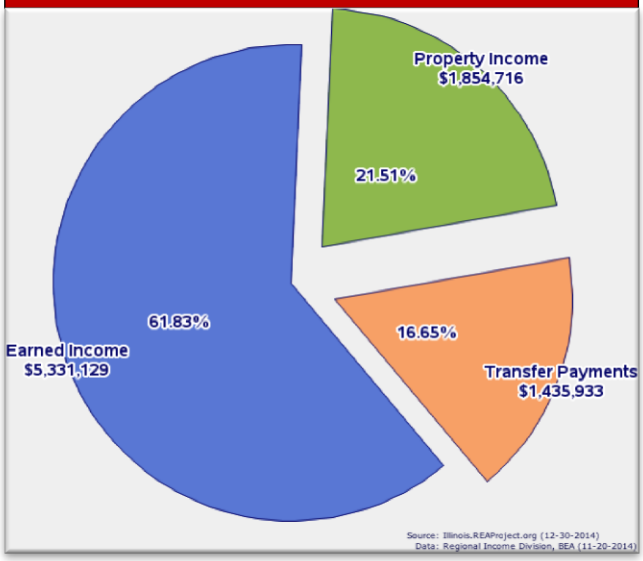
Personal income estimates are considered to be central to tracking and comparing county growth patterns as they are one of the best available local level indicators of general purchasing power. REAP defines personal income as the income received by all persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance.

The personal income of an area, then, is the income that is received by, or on behalf of, all the individuals who live in the area; therefore, the estimates of personal income are presented by the place of residence of the income recipients. **Map 4.1** displays the Real Total Personal Income Growth for Sangamon County compared to the other counties from 1970-



2013.[46] **Figure 4.1**, below, indicates the sources of personal income for Sangamon County in 2013.

FIGURE 4.1: Sources of Personal Income, Sangamon County, 2013 Source: IL-REAP



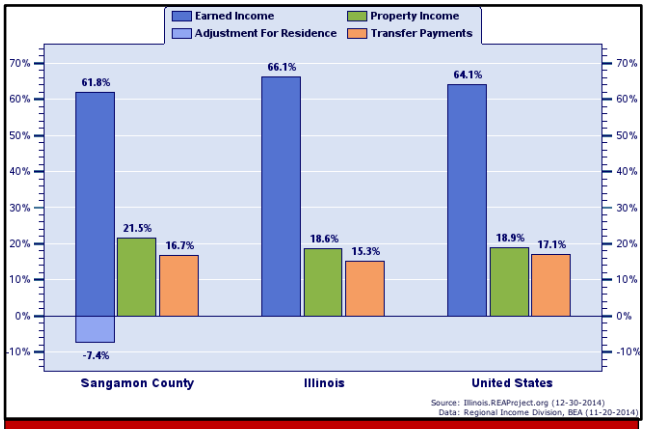


FIGURE 4.2: Sources of Personal Income, County, State and U.S. 2013 Source: IL-REAP

Figure 4.2 provides a comparison of the nature of this income compared to the state and nation, showing that it is very similar to both.

As one can see from **Map 4.1**, Sangamon County had income growth from 1970 to 2013 in the lower half of all Illinois counties, with personal income growth of 2.17% over the 43-year period. This is in comparison to the state growth rate during this same period of 2.10%; or relatively modest growth for both.

What is more revealing, however, is the trend in this growth compared to Sangamon's three benchmark counties. This data is shown in **Table 4.1.**

As the table indicates, Sangamon's personal income grew similarly to two of the counties from 1970 to 2013, with only McLean demonstrating a better rate. However, a decade-by-decade review of rates and rankings shows a different trend. The reader should note that a lower ranking number indicates that a county has shown a higher rate of personal income growth than a higher ranking number would. So in the 1970s, Sangamon ranked 63 in the state for personal income growth, or in the lower half of all counties in the state as the mid-ranked county would be 51.

Sangamon's statewide rankings compared to the other three counties during the period are flavored by higher rates of growth during the earlier periods, with a significant decline since 2000. Even if one were to contend that this decline was due to the Great Recession, the same downturn affected the other three counties as well, and this is somewhat

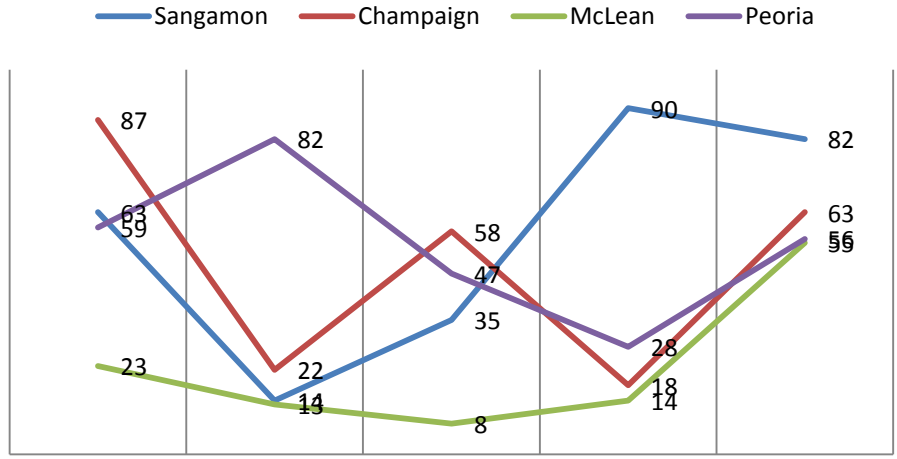
TABLE 4.1: Sangamon County Real Total Personal Income Growth Compared to Peer County Average Annual Percent Change, 1970-2013 Source: IL-REAP

County	1970-2013		1970-1979		1980-1989		1990-1999		2000-2009		2010-2013	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Sangamon	2.17	40	3.18	63	2.37	14	2.39	35	1.07	90	1.39	82
Champaign	2.19	38	2.52	87	1.98	22	1.97	58	2.36	18	2.07	63
McLean	3.21	7	4.25	23	2.38	13	4.15	8	2.44	14	2.30	55
Peoria	1.93	61	3.24	59	0.11	82	2.14	47	2.12	28	2.26	56

demonstrated in **Figure 4.3**.

Even so, *Sangamon's statewide rankings related to personal income growth have lagged the other three benchmark counties in recent years, moving it further away from the middle of the other counties*. As Figure 4.3 shows, Sangamon's best rankings occurred during the 1980's, began to decline in the 1990's, reached its lowest point (90 out of 102 counties) during the past decade, and rebounded somewhat (to 82) during the current decade.

FIGURE 4.3: Personal Income Growth Rankings



The other three counties, however, either held their own or improved somewhat during the last decade, only to lose growth during the first years of the current one. The SSCRPC believes that two factors were at work and are reflected in Sangamon's personal income growth rankings: the effects of the recession, and reductions in government employment in the economic area. Particular note should be made concerning the relationship between the recent recession and government employment.

Earlier in this report comment was made concerning the stability of the Sangamon economic area. This was seen as primarily due to two factors: the limited inter-relationships that business activity in the area has with other, adjoining market areas; and the nature of the industry sectors in the area, a major one being government. While this mix with government – particularly state government – has led to stability in the past, the recession reduced revenues for government. This resulted in fewer employment opportunities in this major employment sector, and less stability in the local job market as the results of fewer public sector jobs – and the spending they provided – rolled through the regional economy.

It is not inconsequential, then, to note that the period in which personal income in Sangamon County grew at its best rate, during the 1980s when the county was ranked 22 out of 102, was also a period in which state government was also growing and largely located in the Springfield metro area. Personal income growth slowed in the 1990s, moving the county from being ranked 22nd to a poorer ranking of 35, during a period of state cut-backs during the early years of that decade.

The real loss of growth occurred during the 2000's as state employment was further reduced and state government positions began to be shifted to other parts of the state. Only during the past few years has personal income growth begun to rebound, and the SSCRPC speculates that this rebound was largely due to growth in the medical sector. While there is anecdotal support for this conjecture, further research will be needed to confirm it.

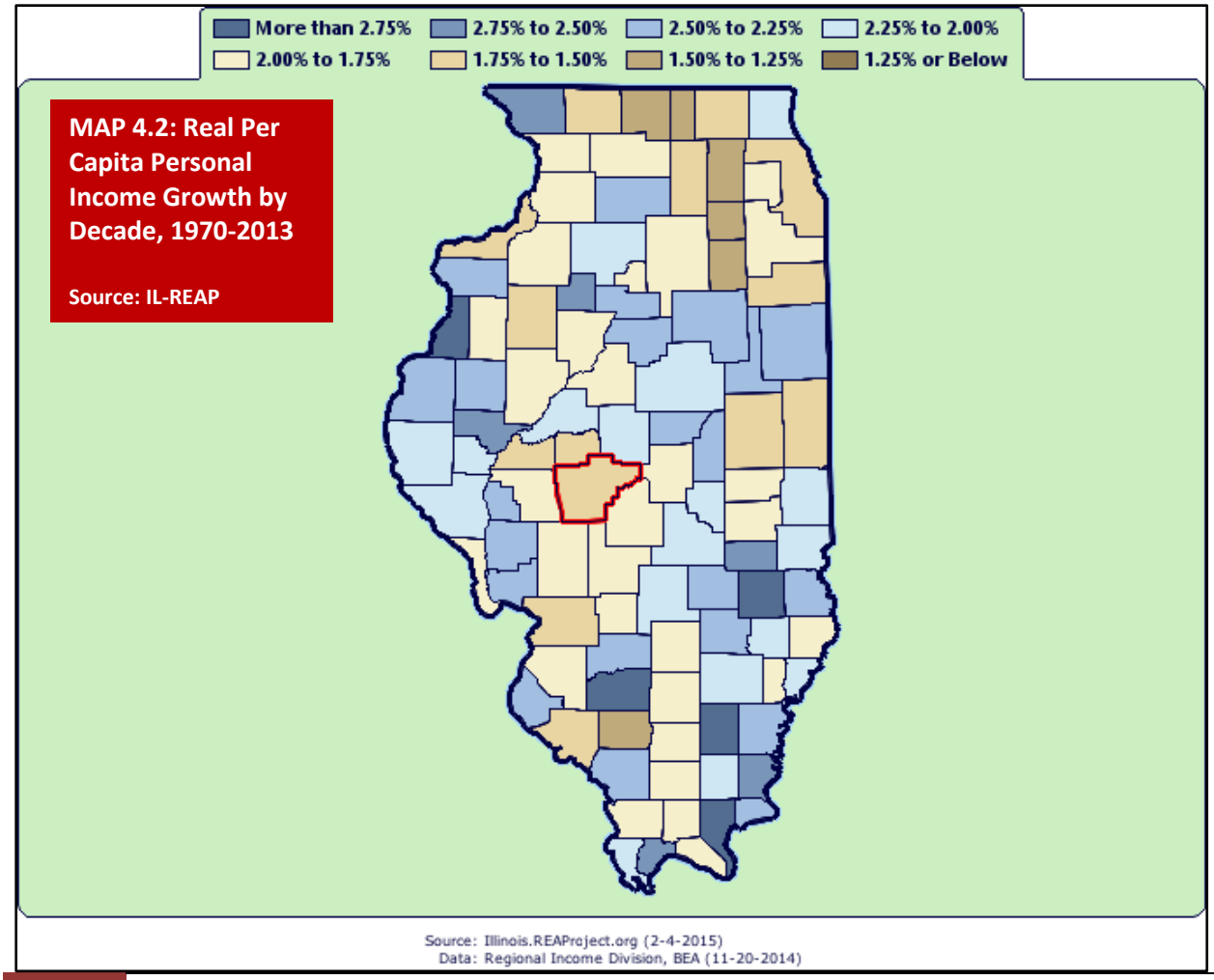
One sees a different dynamic in the other three counties. Other than Peoria, which saw a loss of personal income growth during the 1980's (perhaps due to the same challenges to manufacturing enterprises located there that were being seen by other industrial cities in the Midwest), the rankings have remained rather consistent.

Per Capita Personal Income Growth

As REAP advises, per capita income is one of the most widely used indicators for gauging the economic performance and changing fortunes of local economies. It can be used as a yardstick to assess the regional economic well-being of residents as well as the quality of consumer markets.

It can also effectively be used to assess the economic performance of a region over time, allowing planners to analyze differences in relative economic prosperity between regions. This is not unimportant when one considers that economic areas are often competing with one another for job and business growth. REAP also notes that shifting trends in local per capita income growth can have important social and political ramifications and significant implications in formulating local economic development strategies and initiatives.

Per capita personal income is calculated in the same way as described for personal income above, but is divided by the resident population of the area. It is also different in that personal income is measured as a flow throughout the year, while the measurement of population is at



one point in mid-year. Therefore, per capita income is distorted if a significant change in population occurs during the year. For the data provided in this section, Bureau of Economic Analysis data is used which calculates the population based upon the U.S. Bureau of Census' midyear population estimate.

REAP warns that, "for smaller counties in particular, per capita income in any given year may be exceptionally high or low for the short run because of unusual local conditions, such as a bumper crop, a catastrophe, or a major construction project as the building of a dam or nuclear power plant."

"Farm incomes are notorious for being especially volatile year-to-year, owing to changing weather, work market conditions, and alterations in government programs. Therefore, the per capita income of farm-dependent counties may exhibit sharp fluctuations over time." Also, "the presence of large institutional populations--such as residents attending a local college or the residents of a local prison or state mental institution--can significantly lower the per capita income estimates of an area. Such results may not reflect the relative economic well-being of the non-institutional population and may mislead if care is not given to their interpretation."

The SSCRPC believes that the Sangamon County population and economy is large enough to not be unduly subject to such fluctuations, though some accruing from changes in agricultural markets may occur over time. Equally, the area does not currently maintain the large institutional populations such as we might see in two of our other three benchmark counties, making the use of this data particularly relevant to our analysis of the economic area.

The real per capita income growth for Illinois' counties between 1970 and 2013 is shown on **Map 4.2** on the preceding page. As with total personal income growth, *Sangamon again scores in the lower half of all Illinois counties with a growth rate of 1.67% compared to an Illinois statewide average of 1.74%.* So, how does Sangamon compare with its benchmark counties in this regard?

Table 4.2 compares Sangamon County's per capita personal income growth rate and statewide ranking to that of our three selected peer counties. Looking at the tabular data, the reader will note very similar movements, with Sangamon showing comparative ranking gains during the 1980s and 1990s, but returning to more similar rates and rankings in more recent years. Only Peoria County tended to perform better than the other three, except for the 1980s. We believe that this period was influenced by the national recession during the 1980s which had a significant impact on the heavy equipment manufacturing sector.

What is more interesting is that while Sangamon did not perform as well as Champaign and McLean during the period in real total personal income growth, it appears to perform similarly when this growth is considered on a per capita basis. We believe this is because of a major difference between Sangamon and these two other counties which tends to deflate per capita income gains in Champaign and McLean.

TABLE 4.2: Sangamon County Per Capita Personal Income Growth Compared to Peer County Average Annual Percent Change, 1970-2013 Source: IL-REAP

County	1970-2013		1970-1979		1980-1989		1990-1999		2000-2009		2010-2013	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Sangamon	1.67	88	2.20	83	2.28	12	1.76	57	0.69	91	1.01	94
Champaign	1.63	93	2.07	92	1.69	36	1.63	62	1.21	81	1.45	84
McLean	1.97	54	2.79	50	1.60	44	2.54	9	1.18	82	1.43	85
Peoria	2.01	47	2.97	40	1.05	68	2.06	40	1.96	42	2.06	67

As mentioned previously, large institutional populations – such as college students – have a major effect on per capita income. Both McLean and Champaign counties have such populations, while Sangamon does not. One might expect then that if this difference were factored in to the comparison, McLean and Champaign may show improved rankings vis-à-vis Sangamon.

In addition, and if one were to consider state employment as similar to an "institutional" population in terms of its influence on per capita income, this might also explain a decrease in Sangamon's rate and ranking as the ranking improved during the decades of state government employment expansion and decreased during the decades in which state employment began to be reduced.

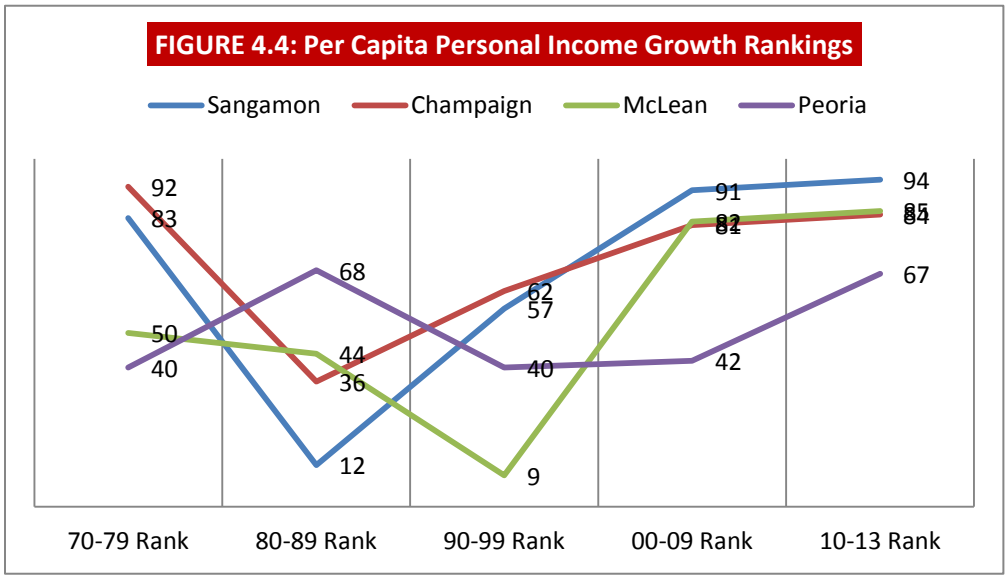


Figure 4.4 shows the nature of the ranking changes for the four counties over time. As noted, Champaign, McLean and Sangamon's rating trends appear to be similar, with Peoria showing the greatest disparity.

Both Champaign and Sangamon begin in the 1970s with the greatest ground to make up, as both have per capita personal income growth rankings within the bottom 20% of Illinois counties at that time. McLean and Peoria, however, have rankings toward the middle of all Illinois counties.

Champaign and Sangamon continue in a similar vein, improving considerably during the 1980s, rising again in the 1990s with mid-range rankings, and then going back to lower rankings in the periods since 2000. However, Champaign performed slightly better than Sangamon during that period.

McLean shows a very similar pattern, but for the 1980s when it's per capita personal income growth was not as good as Champaign and Sangamon. Peoria county, however, shows a much more stable line, except during the 1980s period and during the most recent period shown.

All-in-all, over the course of the period studied, Sangamon's ranking was only in the upper 20% of counties during one decade – the 1980s – and has shown per capita personal income growth ranked in the lower bottom half of Illinois counties during the past two decades based upon the IL-REAP data studied.

This indicates a worrisome trend over a relatively long period of time that should be considered in economic development planning and strategy development. It appears to be related to declining state government employment, but this finding begs the question as to how this employment might be replaced to move the area above a mid-state ranking.

Median Household Income

The trends in personal income were addressed in the sections above as indicators of economic growth in the area. An additional and widely-used indicator of the growth of personal wealth is *median household income*. For this reason the SSCRPC considered it as well. Household income should not be confused with family or personal income, as household income may be the combination of two income earners pooling their resources.

The *median* for household income is used here rather than the average, or *mean*, income, because it has been found to provide a more accurate picture of the average income of the middle class. This is because the median represents the middle value of the household income distribution: half of all households are above the median and half are below. This allows the median to account for results that may be skewed by gains or abnormalities – such as there being more workers making lower salaries than there are workers who make high ones – at either end of the household income distribution.

Table 4.3, below, provides information on the median household income in the Sangamon economic area from 1970 to 2010, along with an estimate for 2014. The first row provides the data in *current* dollars: that is, the value of the dollar at the time the Bureau of Labor Statistics gathered the information. On its face, one sees a progressive increase in household income in the economic area between 1970 and 2014 based upon current dollars.

However, due to inflation and some other economic forces, the dollar does not maintain its value over time. For this reason one needs to look at household income in *constant dollars*. The second row of figures in Table 4.3 provides this information.

Constant dollars adjust for inflation and other factors, providing a better idea of what the real gains or losses in household income might be over a period of years. In this particular case, the SSCRPC calculated household income for the census years 1970-2010 in terms of its value in 2014 dollars using a constant dollar calculator provided by the Bureau of Labor Statistics.

In this way the reader can see that between 1970 and 2000, there was a real gain in median household income in Sangamon County; a bit over 14% increase in household wealth during that period. *However, in 2014 constant dollars the economic area saw a median household income* decline *in 2010 of almost 8% ($4,592). This is a palpable loss in household income, making it comparable to household income in 1990.*

Assuming that the ESRI estimate for 2014 is correct, between 2000 and 2014 median household income in the area will have decreased $6,007, or about 10%.

TABLE 4.3: Sangamon County Median Household Income, 1970-2010 with 2014 ESRI Estimate

County	1970	1980	1990	2000	2010	2014 ESRI Est*
Sangamon (Current Dollars)	$8,486	$18,087	$30,350	$42,957	$50,166	$53,049
Sangamon (Constant 2014 Dollars)	$51,777	$51,964	$54,973	$59,056	$54,464	--

***ESRI estimate.**
**** Inflation adjusted dollars using Bureau of Labor Statistics constant dollar calculator.**

The Long Term Income Growth Pattern and Current Status: "Gaining".

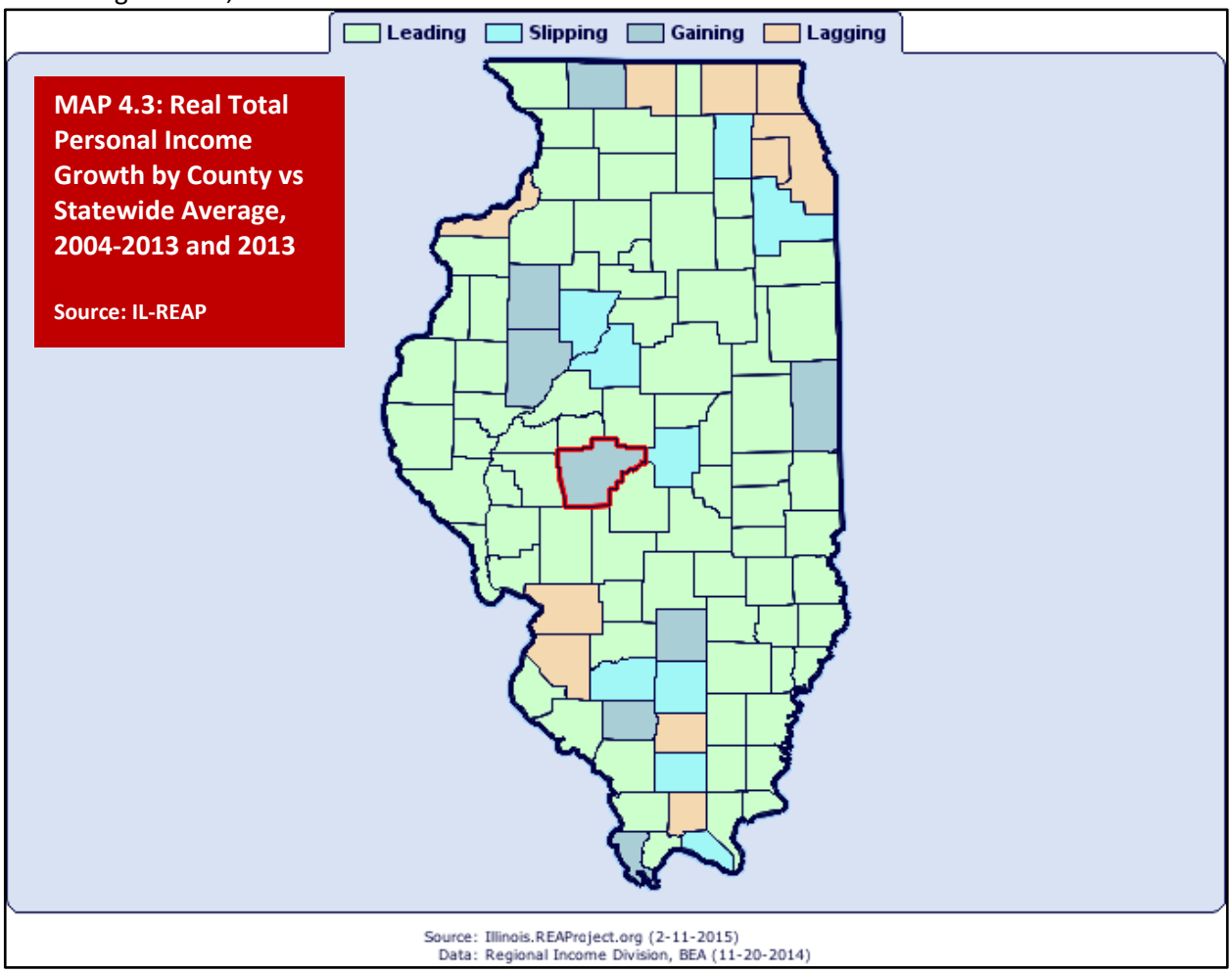
As with population growth, the SSRPC applied the REAP LSGL analysis to long term income growth in the economic area. The general results are shown in **Map 4.3**, below.

Using this approach, *Sangamon County was classified among those counties whose real total personal income growth was seen as* Gaining, *though gaining weakly.* Gaining counties are those whose long-term average annual real total personal income growth rate fell below the statewide average (1.27%), but whose near-term growth has "gained" by registering above the average (1.01%) statewide.

According to REAP, In 2013 the economic area's real total personal income growth rate of 0.91% trailed the statewide overall average of 1.27% over 2004-2013, and its 1.38% growth rate exceeded Illinois' statewide average of 1.01% over 2013. For these reasons, Sangamon was classified as among eight counties seen as gaining, in that real total personal income growth was above the state's average in 2013, even though its longer-term average posted below that of the state from 2004-2013.

The eight counties seen as gaining were: Marion (85th); Fulton (88th); Vermilion (94th); Stephenson (99th); Perry (86th); Knox (93rd); Sangamon (98th); and Alexander (101st).

Figure 4.5 on the next page provides a scattergram showing Sangamon County's position (shown in red as number 98) vis-à-vis the other counties. This graph displays the 102



counties of Illinois as dots on the scattergram, with the vertical axis representing the average annual real total personal income growth rate over the long-term period (2004-2013), and the horizontal axis representing the real total personal income growth rate for the near-term (2013).

This figure sets apart those counties whose long-term real total personal income growth exceeded the statewide average of 1.27%, by portraying them in the top two quadrants demarcated at 1.27% on the vertical axis. Counties whose long-term average annual real total personal income growth rate trailed the statewide average (1.27%) are distributed in the bottom two quadrants. In all, 84 counties surpassed the statewide average over 2004-2013, while 18 counties fell below.

Similarly, the two quadrants on the right of this figure present the positions of the 83 counties whose most recent (2013) real total personal income growth rate exceeded the statewide average (1.01%). The two quadrants on the left feature those 19 counties whose real total personal income growth over 2013 trailed the statewide average.

One should note that even though Sangamon is classified as a county that is Gaining, this is marginal, with its 98 ranking placing it below the horizontal axis and just slightly within the "Gaining" group. This economic area's position is particularly noticeable when compared to the other three benchmark counties. Both McLean (ranked 48th) and Champaign (ranked 58th) are classified as "Leading" counties in terms of real total personal income growth during the period studied. Only Peoria is classified as "Slipping",

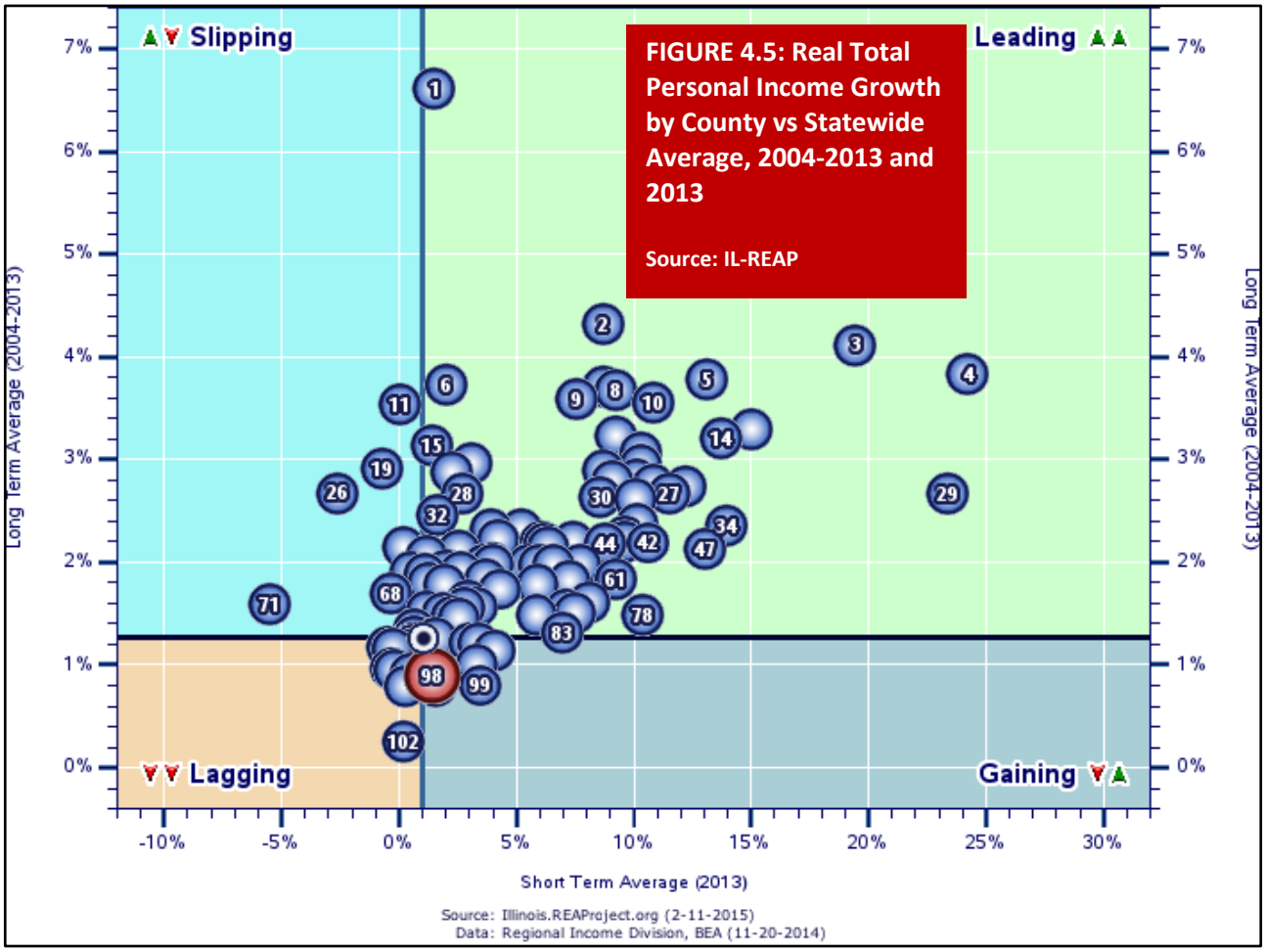


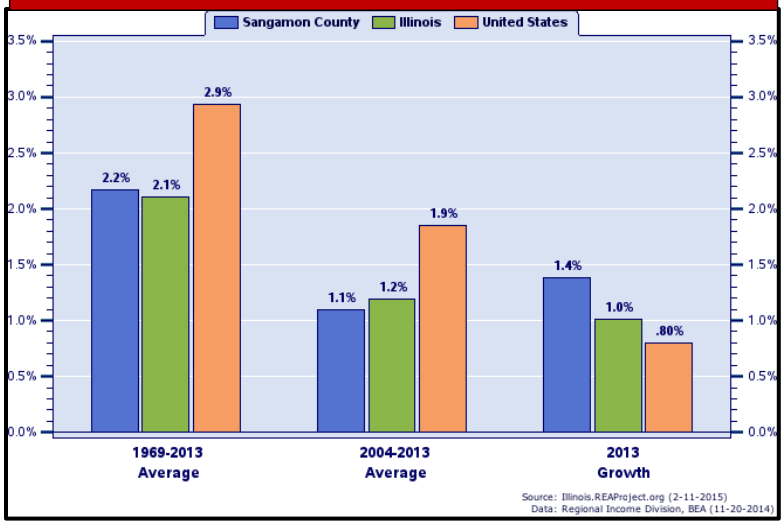
FIGURE 4.5: Real Total Personal Income Growth by County vs Statewide Average, 2004-2013 and 2013

Source: IL-REAP

even though it ranks 26th in income growth over the entire period.

Figure 4.6 provides a comparison of Sangamon's personal income growth average from 1969 to 2013, 2004 to 2013, and for 2013 compared to the state and nation. While the Sangamon economic area lagged behind the national average for the 1969 to 2013 period, it matched and slightly exceeded the statewide growth rate. However, in more recent years (2004-2013) it began to lag both. Only an improvement noted in 2013 shows an increase above the state and national levels.

FIGURE 4.6: Average Annual Percent Change in Real Total Personal Income Growth, Sangamon County, Illinois and U.S. Source: IL:REAP



This is also shown in **Table 4.4**. This table provides a comparison between personal income growth in Sangamon County and Illinois for the 2004-2013 period, indexed in constant 2004 dollars. Those years in which the county has lagged behind the indexed state personal income growth are shaded, and represent five of the 10 years. Also noted in red are period in which either the county or the state have seen negative income growth based upon the constant dollar index.

While the LSGL analysis shows that the economic area is making gains in real total personal income, these gains are weak and less than those seen by our three benchmark counties.

TABLE 4.4: Sangamon County and Illinois, Total Personal Income, 2004-2013 Source: IL-REAP

	Sangamon County					Illinois				
Year	Current Dollars (1000s)	Constant Dollars (1000s)	Index	% Change	% of State Total	Current Dollars (1000s)	Constant Dollars (1000s)	Index	% Change	% of National Total
2004	6,532,807	7,282,707	100.0	-0.82	1.43	455,496,017	507,782,367	100.0	1.99	4.54
2005	6,640,080	7,197,061	98.8	-1.18	1.40	475,352,326	515,225,638	101.5	1.47	4.48
2006	6,903,611	7,287,748	100.1	1.26	1.36	508,081,357	536,352,497	105.6	4.10	4.47
2007	7,231,465	7,447,287	102.3	2.19	1.35	536,525,695	552,538,254	108.8	3.02	4.47
2008	7,543,253	7,538,353	103.5	1.22	1.37	552,295,230	551,936,471	108.7	-0.11	4.44
2009	7,603,913	7,603,913	104.4	0.87	1.43	531,645,236	531,645,236	104.7	-3.68	4.40
2010	7,778,178	7,651,695	105.1	0.63	1.44	539,688,876	530,912,886	104.6	-0.14	4.35
2011	8,217,650	7,890,282	108.3	3.12	1.45	567,838,737	545,217,656	107.4	2.69	4.31
2012	8,403,669	7,923,355	108.8	0.42	1.42	592,056,538	558,217,399	109.9	2.38	4.27
2013	8,621,778	8,032,737	110.3	1.38	1.42	605,201,478	563,854,060	111.0	1.01	4.28

Index based upon 2004 = 100
Real total personal income determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00). Actual price deflator calculation available from IL-REAP.
Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014.
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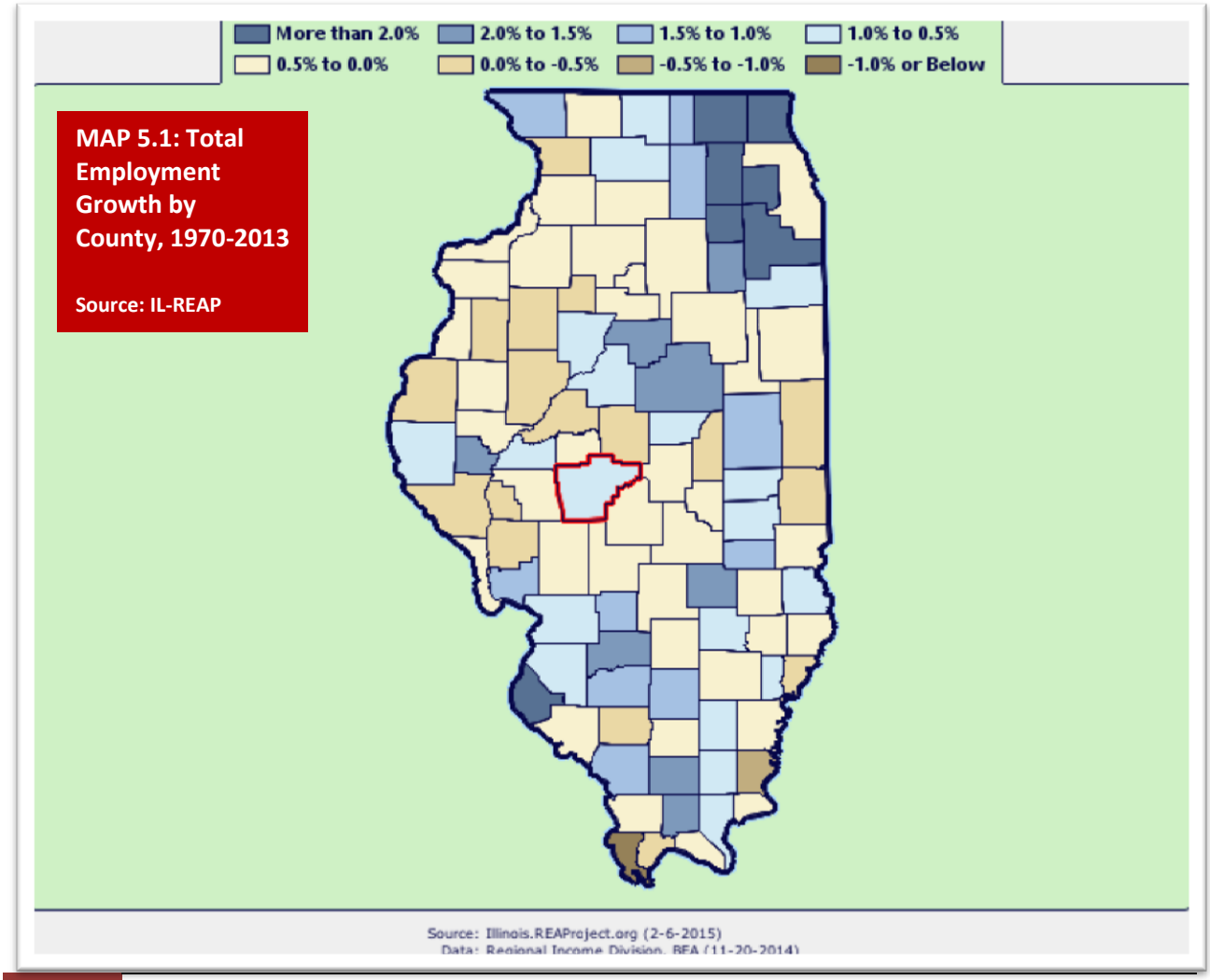
5. Trends in the Nature and Extent of Job Growth in the Economic Area

Whether a fair measure or not, economic development success is most often measured by job growth. Even though comparing gross employment numbers can lead one to assume that all jobs are equal when they are not, they remain one of the most popular and frequently used statistics for measuring economic growth and development strategy success. For this reason, the SSCRPC also looked at job growth trends as a factor in its analysis of the economic area.

Total Employment Growth

Presented in this section are employment estimates from the Bureau of Economic Analysis (BEA) of the U.S. Commerce Department. These estimates measure the number of full and part-time wage and salary employees, plus the number of proprietors of unincorporated businesses. The BEA counts people holding more than one job for each job they hold in the employment estimate, and full-time and part-time jobs are given equal weight. This means that each job reported may not be tied to only one worker, and the job count considers part-time jobs as being equal to full-time ones, potentially over estimating job growth.

It also counts employment by place of work



MAP 5.1: Total Employment Growth by County, 1970-2013

Source: IL-REAP

rather than by place of residence, so not all of the jobs reported here are held by Sangamon County residents. Earlier in this report we noted the number of those in the labor force who live in other areas and commute into this economic area to work.

Map 5.1, on the preceding page, shows total employment growth for all Illinois counties from 1970 to 2013. Sangamon County ranked at the bottom of the upper half of all counties during this period, with an 0.89% growth rate compared to the state's 0.86% over the same period. It's rankings over time, however, show a pattern similar to that described previously for personal income, although the results were more positive overall.

Figure 5.1 provides a comparison of the Sangamon economic area's job growth over time to those in the other three benchmark counties. During the 1970's and 1980s, Sangamon's employment growth ranked in the top quarter for all Illinois counties; ranking 23rd and 13th, respectively. By the 1990s it had dropped to the lower half (64th), with the rate of growth falling into negative numbers although the ranking improved somewhat. During the 2010 to 2013 period, the rate of growth improved, although it continued in negative numbers, with its statewide ranking decreasing slightly.

This pattern was very similar for Champaign County, although there was a significant improvement there during the 2000 to 2009 period. McLean showed signficant growth compared to the other counties, with high rankings and rates of growth until the most recent period (2010-2013). Peoria County showed gains in the 1970s, but its rate of job growth has declined since, marking its lowest period in the 1980s. **Table 5.1** shows the comparison rankings of average annual employment change for Sangamon and the three peer counties.

Altogether the results are similar to those found earlier regarding income. The local economic area performed well during the 1970s due to job growth associated with some large employers in the area – including manufacturers – at that time, and further gains were made in the 1980s as government employment in the region increased. It is not surprising that these gains were lost in the 1990's and after as larger employers left or reduced their payrolls and state government employment declined. The later 2000s were, of course, affected by the recession, which is

Figure 5.1: Average Annual Employment Change Rankings, 1970-2013

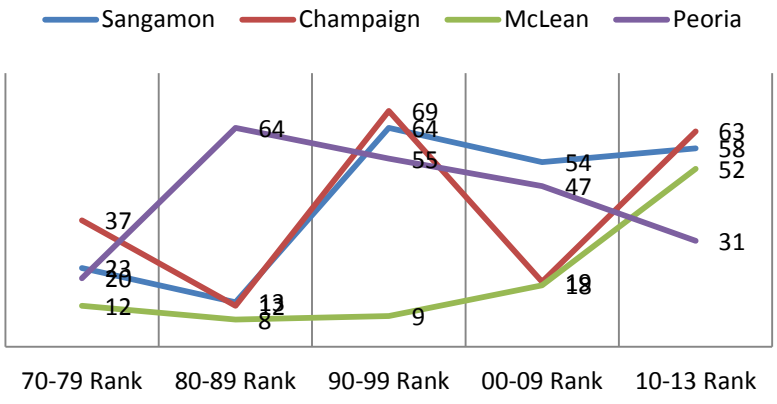


TABLE 5.1: Sangamon County Average Annual Employment Change Compared to Peer County Average Annual Change, 1970-2013

County	1970-2013		1970-1979		1980-1989		1990-1999		2000-2009		2010-2013	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Sangamon	0.89	29	2.07	23	1.47	13	0.94	64	-0.45	54	-0.26	58
Champaign	0.97	26	1.53	37	1.54	12	0.82	69	0.51	19	-0.34	63
McLean	1.92	8	2.84	12	1.83	8	3.26	9	0.52	18	-0.03	52
Peoria	0.66	38	2.14	20	-0.35	64	1.13	55	-0.20	47	0.51	31
U.S.	1.60		2.21		1.88		1.73		0.77		1.14	

demonstrated by declined in the other counties as well. Peoria, we believe, has seen some increases in job growth in later years due to a rebounding of the heavy equipment industry.

In any event, it seems clear from these results that the fundamental sectors that make up the Sangamon County economy have not been able to make up for jobs shed in both government and private sector, and this decline spans at least two decades.

This will in part be demonstrated by the results noted in a later section of this report.

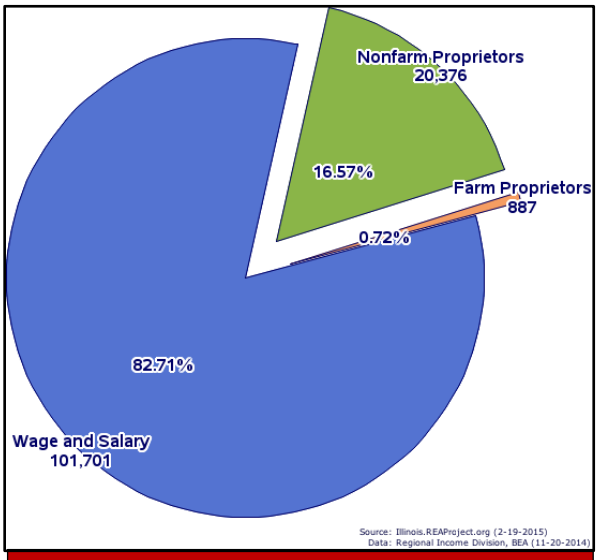


FIGURE 5.2: Major Components of Total Employment in Sangamon County, 2013
Source: IL-REAP

The Effect of Proprietorships on Regional Economic Growth

It is quite common for those involved in economic development to discuss the importance of small business growth to overall job growth, even though most economic analyses provide little insight into this component of local employment. Observers and analysts who monitor general economic trends seem better acquainted with the type of job growth that takes notice of trends within specific industry classifications rather than the nature of employment growth by type. This tends to emphasize wage and hourly jobs over those arising from self-employment and small partnerships; the yeast from which many larger businesses rise.

However, and as REAP notes, self-employment, particularly by what are often termed Nonfarm Proprietors, has been an unheralded but remarkable source of job growth in the national economy for some time, contributing significantly to total job growth overall. For this reason the SSCRPC thought it important to address this factor of employment growth in the Sangamon economic area.

Figure 5.2 shows the major components of total employment in Sangamon County for 2013, the most recent year for which data is available. It separates Nonfarm and Farm Proprietors from the employment we most often consider when assessing economic activity: Wage and Salary earners working for others. Proprietors' employment reported here consists of the number of sole proprietorships and the number of partners in partnerships.

One will note that Wage and Salary employment makes up the bulk of employment in the economic area (82.71%), but Proprietors make up the remainder (17.3%), accounting for over 21,000 of the 122,964 jobs BEA reported in Sangamon for 2013. *This means that for every 100 jobs reported, about 17 were held by self-employed Nonfarm or Farm Proprietors*. But the question remains: how did the Sangamon economic area perform in generating sole proprietors and small partnerships within the local marketplace? To help answer this question and provide some context, **Figure 5.3** on the following page compares Sangamon County to the state and nation based upon the three major components of employment shown in the chart above.

One notes that the share of the Sangamon economic area's employment reported as Nonfarm Proprietor's employment (16.6%) is below the national share (21.0%) by 4.4%. It is

also below the state share by 3.0%. The Farm Proprietors' employment is also slightly below the state and national shares for the same employment; 0.7% vs. 0.8% and 1.0% respectively.

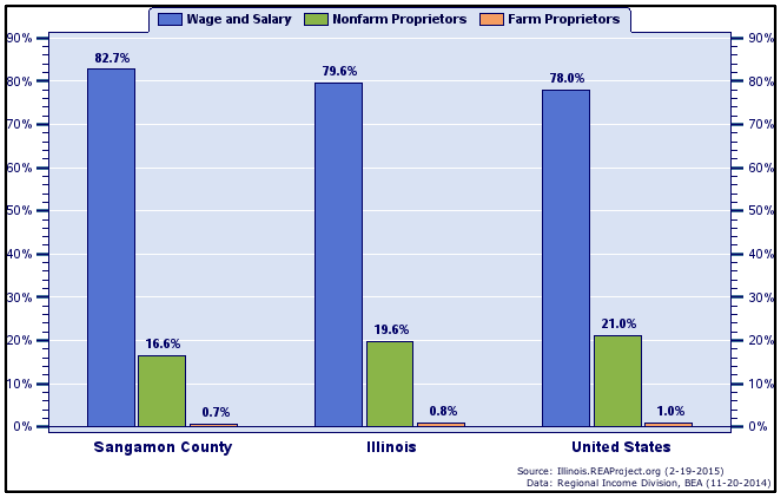
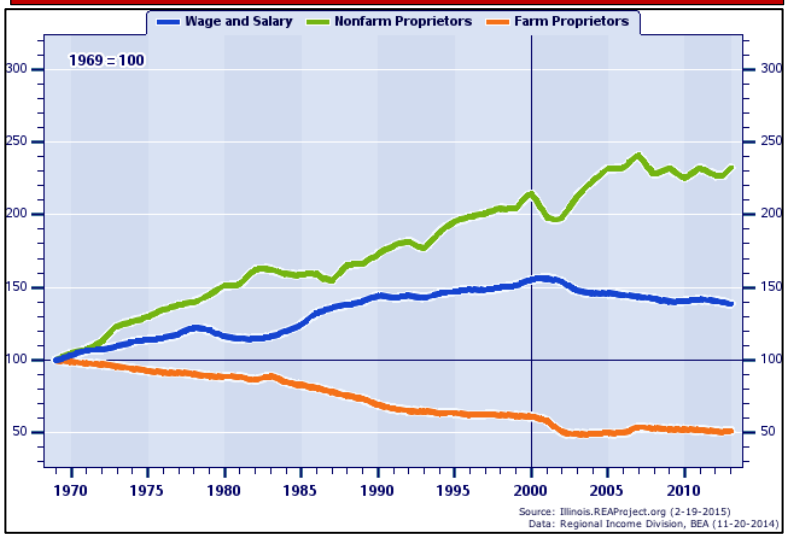


FIGURE 5.3: Major Components as Percent of Total Sangamon County, Illinois and U.S. Employment, 2013
Source: IL-REAP

FIGURE 5.4: Employment and Growth Indices (1969 = 100), Sangamon County, 1969-2013 **Source: IL-REAP**

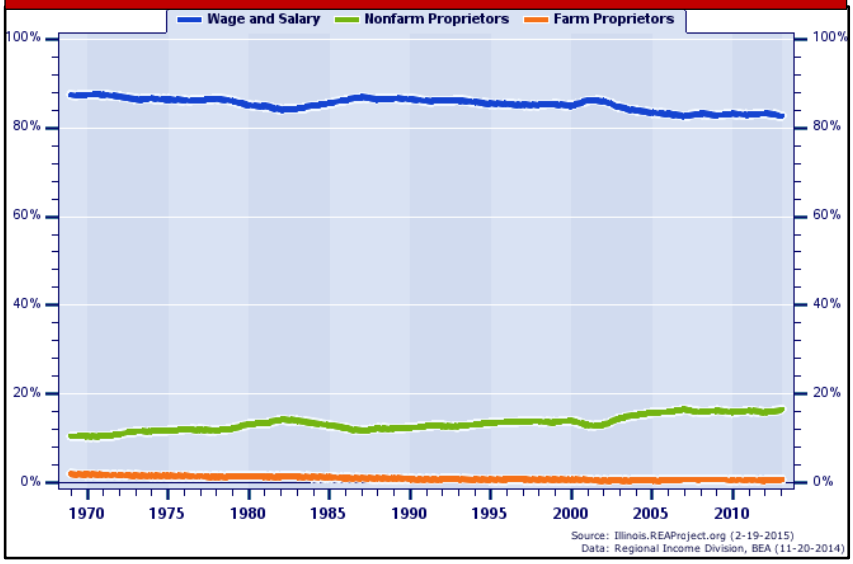


In 2013, there were just over one (1.08) Nonfarm self-employed job for every four Wage and Salary jobs nationwide. However for Sangamon County, there was just one Nonfarm self-employed job for every five Wage and Salary jobs.

As a proportion of employment, Nonfarm Proprietors *have* increased their share of employment growth in the region over time even though they lag behind the state and nation. **Figure 5.4** compares the cumulative growth of the three major components of employment in the Sangamon economic area from 1969 to 2013, indexed as a percent of their level in 1969. *Over this period, Wage and Salary employment in Sangamon increased by 38.8% compared to their 1969 share, however Nonfarm Proprietors' employment increased by 132.2%.* Only the Farm component decreased (-48.8%). This means that in 1969 there was roughly one self-employed Nonfarm Proprietors job for every eight (8.35) Wage and Salary jobs in the county, but over the 44-year period, for every Nonfarm job created, about two and a half (2.45) Wage and Hourly jobs were added to the employment rolls.

While this data indicates an increase in growth of the Nonfarm employment component, it also shows a decline in the Wage and Salary jobs component during the 1980s and since about 2000. The SSCRPC does not believe that it is coincidental that Nonfarm Proprietors show an uptick during both of these periods, perhaps taking up some of the employment slack during the early 1980s recession, as well as a slowing rate of growth in Wage and Hourly jobs in the region starting with reductions in state government employment in the late 1990s.

FIGURE 5.5: Major Components as Percent of Total Sangamon County Employment, 1969-2013 Source: IL-REAP



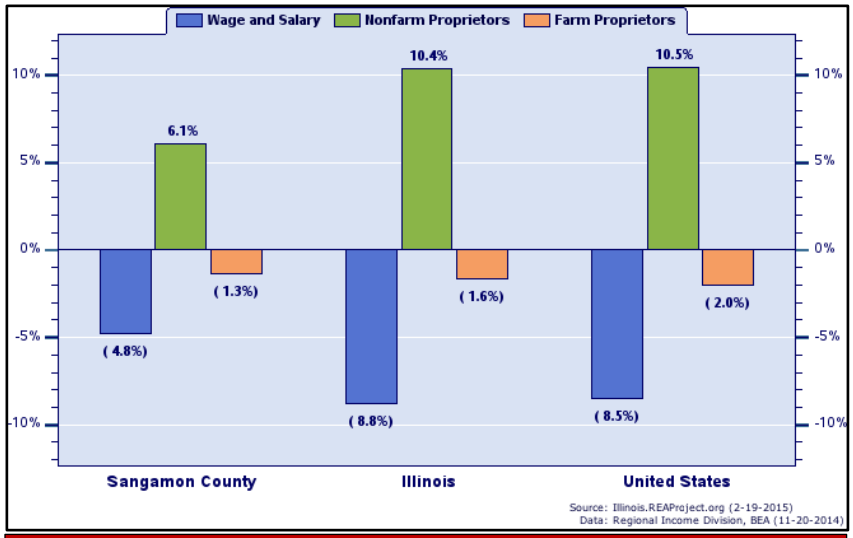


Figure 5.6: Shifts in Share of Total Sangamon, Illinois and U.S. Employment Among Major Components, 1969-2013
Souce: IL-REAP

This is partially indicated by the data displayed in **Figure 5.5**, which shows the three major components of employment as a percent of total employment from 1969 to 2013.

While Figure 5.4 showed the differences in the degree of growth among the three major employment components, Figure 5.5 illustrates their changing share and relative importance over time. Wage and Salary employment as a share of Sangamon economic area employment declined from 87.5% in 1969 to 82.7% in 2013, a shift in relative share of -4.8%: a noticeable decline. This was somewhat offset by a 6.1% increase in the Nonfarm component, going from 10.5% in 1969 to 16.6% in 2013. The Farm employment share continued to shrink, going from 2.1% in 1969 to 0.7% in 2013.

So, how did this shift in Sangamon's employment composition compare with like shifts at the state and national levels? Figure 5.6 provides this information. Wage and Salary employment's share for Illinois and the nation declined by -8.8% and -8.5%, respectively, from 1969-2013, whereas this share declined by only -4.8% in Sangamon during the same period. The Nonfarm share for Illinois increased 10.4%, while the national share rose 10.5%. Sangamon County's share also rose, by 6.1%, but did not match that of either the state or nation

All-in-all we believe that these results are instructive of trends affecting the nature of small business job growth in the region and may also indicate some structural changes that have occurred.

To the extent that an increase in growth of proprietorship may be seen as a surrogate for small business growth, such growth has occurred but has not kept pace with the state or nation. It also seems to track with a slowing rate of Wage and Salary employment shown in **Figure 5.6.**

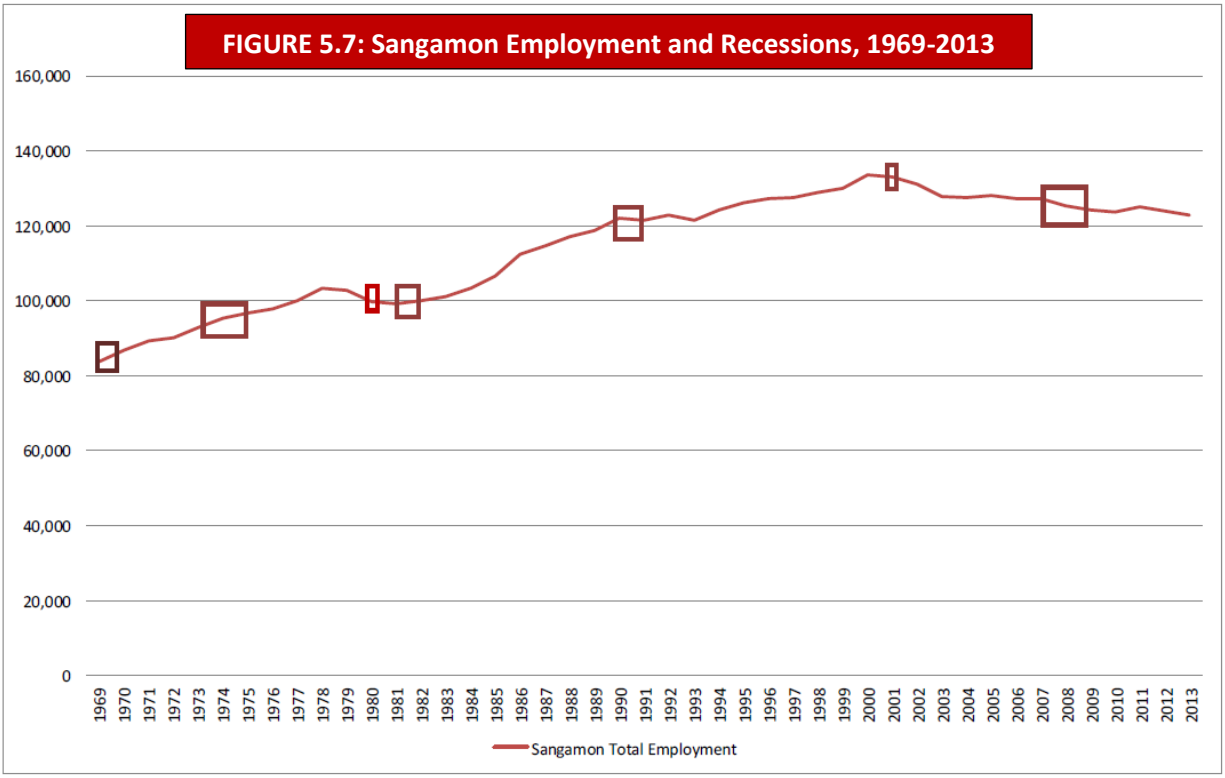
Recent Employment Growth by Major Industry Sector

Of course employment growth is not generic, although some traditional economic analyses are presented in those terms. However, considering job growth by specific industry sector in context with overall growth is informative as it provides another snapshot of an economy over time, and is particularly instructive in identifying existing industry sectors that could be engines for future growth.

Table 5.2, at the end of this section, describes employment growth in more recent years than we have reviewed so far: the 10-year period from 2004 to 2013. The SSCRPC elected to look at this more recent data, rather than the longer 1970 to 2013 period, for three reasons: to provide a more current snapshot of the regional economy; overcome changes that have been made to the definitions of industry sectors and their classifications that occurred during the longer period; and to look for any dynamic changes in sectors following the most recent recession. For the reader's information we provide **Figure 5.7** which shows employment growth in the economic area from 1969 to 2013 with National Bureau of Economic Research (NBER) identified recessions indicated.

As Table 5.2 indicates, over this 10-year period the total employment in the Sangamon economic area declined by 4,790 jobs, or about 3.8% of 2004 total employment. Employment during this period was rather stable from 2004 through 2007, showing a slight increase in 2005. However, employment began to decline in 2008. We attribute this decline to the national recession, which the NBER identifies as the 18-

FIGURE 5.7: Sangamon Employment and Recessions, 1969-2013



Recessions Identified by NBER for Period: Dec. 1969-Nov.1970; Nov. 1973-March 1975; Jan. 1980-July 1980; July 1981-Nov. 1982; July 1990-March 1991; March 2001-Nov. 2001; Dec. 2007-June 2009. Location of recessions on chart are only approximate.

month period from December 2007 until June 2009.[47] Even so, and as Table 5.2 indicates, there was a slight rebound in 2011, although this was followed by two successive years of additional employment decline.

The table also places the discussion above concerning shifts in the components of local employment in a more current context.

Previously we noted a longer term trend in declining Wage and Salary worker employment. The data for 2004-2013 shows this as well, with Wage and Salary worker employment dropping by 5,623 (or 5.24% of the 2004 employment level) during this period. However, Proprietors employment exclusive of Nonfarm showed slight gains, with Nonfarm Proprietors employment increasing by 803 jobs; a small but palpable increase. The SSCRPC speculates that some of this increase could be due to those who have lost Wage and Salary employment due to the recession going into business for themselves, as well as retirees re-entering the workforce in both full and part-time proprietary jobs. Additional research would be needed to determine if this is the case.

As job changes by industry sector are informative, Table 5.2 also provides employment figures for 20 standard industry sectors. Industry areas showing particular job growth and decline are highlighted in the table, with those showing an increase of 5% or more highlighted in green, and those showing declines of 5% or more highlighted in yellow.

Of the 20, four industry sectors – Forestry, Fishing & Related; Mining; Utilities; Transportation & Warehousing – could not be assessed as the data provided by BEA suppressed some years to avoid disclosure of confidential information that would identify individual firms. This is not unusual, particularly for data drawn from smaller economic areas.

Of the 16 remaining classifications, three remained relatively static over the period studied: Arts, Entertainment & Recreation; Accommodation and Food Services; and Other Services except Public Administration. Public administration associated with government is addressed in the Government and Government Enterprises job numbers, and will be considered more fully below.

The fact that the Arts and Accommodations sectors were static may indicate a low impact by the tourism and hospitality industries on job growth – both full and part-time – during this period. We believe that this is particularly worthy of special note given tourism's anticipated importance to the regional economy. To the extent that tourism is seen as a major driver of current and future job growth, and given that tourism is not normally considered as an industry sector, the businesses collected in the Arts and Accommodations classifications may be good surrogates in considering the contribution that tourism is making to job growth in the area, and more informative than some economic modeling.

Only four of the 16 industry sectors show employment gains of 5% or more during this period: Finance & Insurance; Administrative & Waste Management Services; Educational Services; Health Care & Social Assistance. Only one of these – Health Care – is regularly identified as a potentially strong future employment generator for the economic area. The data in Table 5.2 appears to confirm this, as the sector added 3,244 jobs during the 2004-2013 period, or about 19.3% more than were in this sector in 2004. Even though this job gain is not solely attributable to medical care, as Social Assistance employment is included, *it remains a convincing bright spot in the recent employment picture.*

Of greater concern is that *eight of the sectors, half of the 16 for which data was available, saw employment declines of 5% or more over the period.* These include:

- Construction.
- Manufacturing.
- Wholesale Trade.

- Retail Trade.
- Information.
- Real Estate & Rental & Leasing.
- Professional, Scientific, & Technical Services.
- Management of Companies & Enterprises.
- Government & Government Enterprises.

Some of this decline may be attributed solely to the recession. Using the NBER recession dates of 2007-2009, we find that five of the eight sectors saw the majority of their decline during and/or following this period: Construction; Wholesale Trade; Retail Trade; Information; and Real Estate. However, two appear to be the result of longer term trends that may have only been exacerbated by the recession – Manufacturing, and Government & Government Enterprises – and one that appears to be a decline caused by more recent forces: Professional, Scientific, & Technical Services.

The SSCRPC believes that those involved in economic development planning and implementation should be particularly attentive to the decline in the Professional, Scientific & Technical Services sector and see additional information as to its cause. A loss of jobs in this sector, particularly if it extends over the next several years, would show a noticeable weakness in the economic area's ability to compete in the modern economy, grow technology-related start-ups, and attract technology-related companies.

Of the eight sectors showing decline, only two show much of a rebound post-recession: Retail Trade and Real Estate. The potential for a rebound in these two sectors is of particular importance to local governments given the impact that these two sectors have on local tax revenues.

The SSCRPC believes that special attention should also be given to the data provided at the bottom of Table 5.2, as it addresses government employment in the economic area. As a state capital, for many years a large component of the region's workforce was made up of government employment: local, state and federal. Residents in the area also spoke of the State of Illinois as the major employer in the region. While the state may be still be the largest *single employer*, state government no longer holds first place as having the largest number of *employees*.

We reported above that Government & Governmental Enterprises is one of the sectors in which employment declined by more than 5% during the 2004-2013. **Table 5.3**, below, provides a different view as to how government

TABLE 5.3: Government Employment in Sangamon County Compared to Next Largest Industry Sectors, 2004-2013 Source: IL-REAP calculations from BEA data

Employment Sector	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
State *and* Local Government	24,183	22,763	21,935	20,951	19,817	19,919	19,463	19,473	19,090	18,851
State Government	14,039	12,758	11,703	10,588	9,407	9,283	8,958	8,946	8,644	8,546
Local Government	10,144	10,005	10,232	10,363	10,410	10,636	10,505	10,527	10,446	10,305
Retail Trade	14,728	14,910	14,889	14,678	13,938	13,706	13,514	14,275	14,114	13,891
Health Care and Social Assistance	16,846	16,940	17,391	17,822	18,032	18,558	19,214	19,725	19,993	20,090
Finance and Insurance	8,020	8,130	8,247	8,455	8,791	9,254	9,020	9,455	9,553	9,680

Please Note: Employment numbers above include both full and part-time jobs.

employment – particularly State employment – changed during the 10 years studied. The reader will see that state and local government combined shed 5,332 jobs during the period. This represents a 22% decline over the 10-year period reviewed. However, this loss was not due to declines in local government employment, which remained relatively stable over the 10 years.

According to the IL-REAP analysis shown in Tables 5.2 and 5.3, State government employment in the county declined by 5,493 from 2004 to 2013, for a 39% decline compared to what state employment was in 2004. This is almost as many jobs lost as was reported earlier in this report (Table 2.3 in Section 2, above) based upon an estimate provided by IDES. That estimate indicated that there were 17,400 state government employees in the region in 2010, while the IL-REAP calculations place the number at not quite 9,000.

The differential between the IDES estimate and the IL-REAP one can be accounted for in several ways, but overall it is indicative of an on-going and significant reduction in state employment, which shows no sign of easing. *To the extent that local economic development planning considers state employment, it must consider it currently a task of managing decline by generating job growth in other sectors.*

Compared to other sectors, for example, in 2004 state government employment was the third largest employment sector in the county, lagging only Health Care and Retail Trade. By 2013, it had dropped to fourth, as it also generated fewer jobs than the Fire & Insurance sector. It even lagged behind local government employment.

In the case of local government employment, the employment differential was not due to local governments adding jobs, for as the data shows, local government employment declined over the most recent years. While Fire & Insurance did see some job growth, the difference between the state employment ranking and the Fire & Insurance one, was primarily due to a decline in State employment rather than significant employment improvement in Fire & Insurance.

All-in-all, by the end of 2013, the major employment growth sectors in the Sangamon economic area were Health Care & Social Services, Retail Trade, and Fire & Insurance, with State government employment continuing to decline.

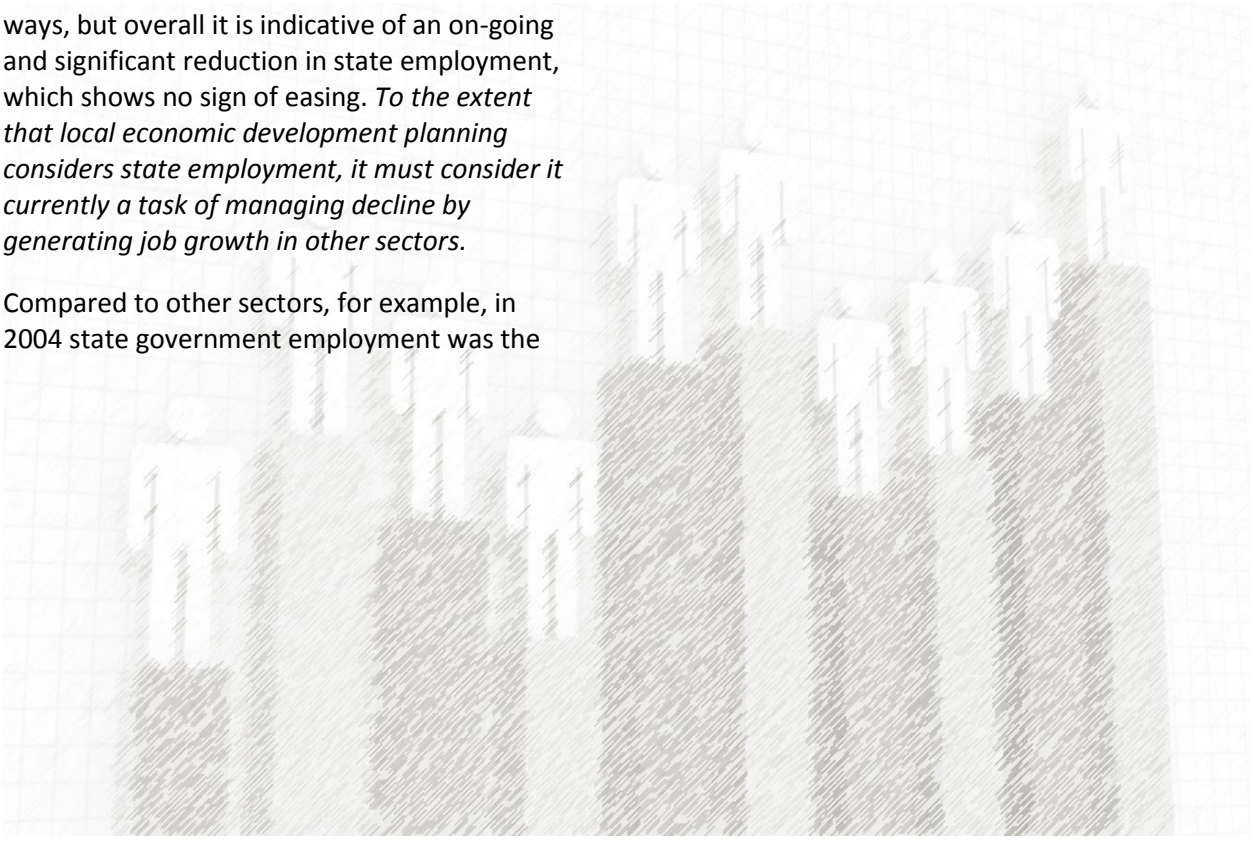


TABLE 5.2: Full-Time and Part-Time Employment by Major Industry in Sangamon County, 2004-2013 (IL-REAP)										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total employment	127,754	128,331	127,485	127,274	125,340	124,284	123,840	125,222	124,125	122,964
Employment By Type of Work:										
Wage and salary employment	107,326	107,144	106,210	105,217	104,398	103,019	103,136	103,946	103,293	101,701
Proprietors employment	20,428	21,187	21,275	22,057	20,942	21,265	20,704	21,276	20,832	21,263
Farm proprietors employment	855	866	866	931	920	914	911	902	887	887
Nonfarm proprietors employment	19,573	20,321	20,409	21,126	20,022	20,351	19,793	20,374	19,945	20,376
Employment By Industry Sector:										
Farm employment	1,066	1,098	1,098	1,153	1,121	1,104	1,134	1,117	1,089	1,039
Nonfarm employment	126,688	127,233	126,387	126,121	124,219	123,180	122,706	124,105	123,036	121,925
Private nonfarm employment	100,058	102,091	102,064	102,742	101,998	100,909	100,756	102,250	101,613	100,797
Forestry, fishing, and related activities	211	225	214	S	S	S	S	S	S	S
Mining	411	447	470	S	S	S	S	S	S	S
Utilities	203	226	222	229	214	S	227	S	S	S
Construction	6,698	6,548	6,446	6,533	6,410	5,748	5,580	5,450	5,248	5,431
Manufacturing	3,569	3,477	3,455	3,593	3,653	3,493	3,383	3,227	3,226	3,191
Wholesale trade	4,064	4,254	4,273	3,942	3,720	3,676	3,649	3,602	3,592	3,672
Retail trade	14,728	14,910	14,889	14,678	13,938	13,706	13,514	14,275	14,114	13,891
Transportation and warehousing	2,223	2,270	2,191	2,335	2,552	S	2,231	S	S	S
Information	3,334	3,246	3,155	2,992	2,884	2,584	2,293	2,149	1,674	1,626
Finance and insurance	8,020	8,130	8,247	8,455	8,791	9,254	9,020	9,455	9,553	9,680
Real estate and rental and leasing	4,012	4,237	4,065	3,952	3,809	3,688	3,614	3,656	3,496	3,525
Professional, scientific, and technical services	7,207	7,223	7,063	7,531	7,696	7,792	7,414	7,351	6,940	6,425
Management of companies and enterprises	833	755	722	701	793	675	830	706	701	747
Administrative and waste management services	6,016	6,281	6,249	6,467	6,618	6,445	7,236	7,602	7,879	7,081
Educational services	1,731	1,837	1,955	1,961	2,042	2,132	2,178	2,188	2,299	2,374
Health care and social assistance	16,846	16,940	17,391	17,822	18,032	18,558	19,214	19,725	19,993	20,090
Arts, entertainment, and recreation	1,971	2,031	2,038	2,036	2,059	2,085	2,090	2,050	2,011	2,057
Accommodation and food services	9,356	10,351	10,345	10,056	9,389	9,177	9,045	9,294	9,128	9,339
Other services, except public administration	8,625	8,703	8,674	8,779	8,635	8,632	8,446	8,536	8,769	8,668
Government and government enterprises	26,630	25,142	24,323	23,379	22,221	22,271	21,950	21,855	21,423	21,128
Employment by government										
Federal, civilian	2,034	1,994	1,985	2,014	1,984	1,938	2,061	1,923	1,894	1,837
Military	413	385	403	414	420	414	426	459	439	440
State and local	24,183	22,763	21,935	20,951	19,817	19,919	19,463	19,473	19,090	18,851
State government	14,039	12,758	11,703	10,588	9,407	9,283	8,958	8,946	8,644	8,546
Local government	10,144	10,005	10,232	10,363	10,410	10,636	10,505	10,527	10,446	10,305

Source: Calculations by IL-REAP from data provided by BEA, Nov. 2014. Footnotes to table:

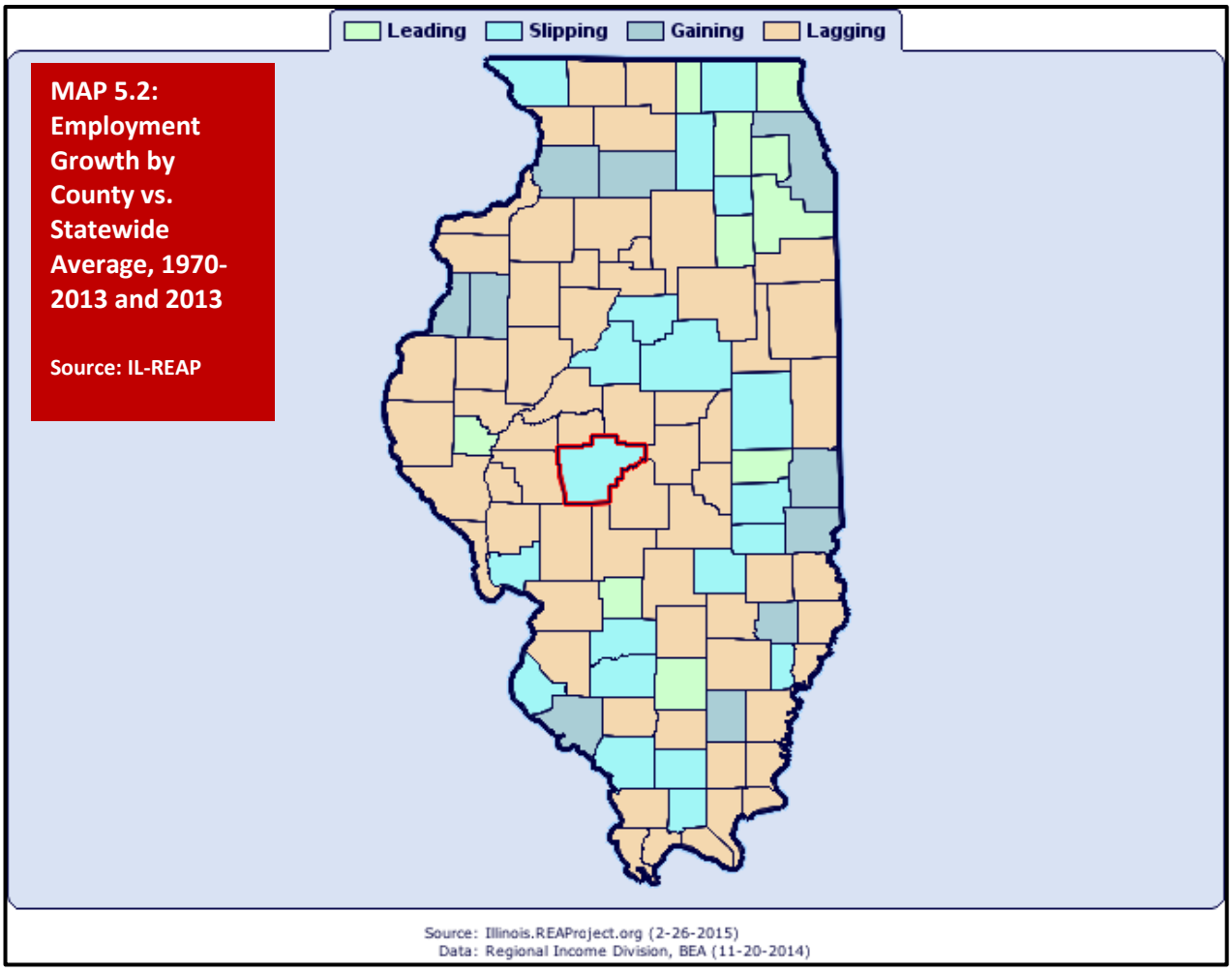
1. Estimates of employment for 2001-2006 based on 2002 NAICS. Estimates from 2007-2013 based on 2007 NACIS.
2. Employment by type of work data excludes limited partners.
3. "S" in table indicates data suppressed in accordance to law to prevent disclosure of confidential information.
4. 5% or more decline highlighted in yellow, 5% or more increase highlighted in green.

The Long Term Employment Growth Pattern and Current Status: "Slipping"

To better assess the economic area's long term employment patterns and current status, the SSRPC again turned to REAP's LSGL analysis. The general results are shown in **Map 5.2**, below. As one might guess from the previous comments in this section, the region was classified as *Slipping* in employment growth by the LSGL assessment.

The area was classified among the 20 counties in the state whose employment growth recorded below the Illinois average in 2013 even though its long-term average posted above that of the statewide average for the entire 1970-2013 period. Sangamon County's employment growth rate of 0.89% did surpass the statewide overall average of 0.86% over the entire period of 1970-2013, however its -0.94% growth rate clearly trailed Illinois' average of 0.98% for 2013.

Along with Sangamon (which ranked 29th in the analysis) two other of its peer counties were also identified as having slipping employment growth: Champaign (which ranked 26th) and McLean (8th). All fared better than Peoria (ranked 38th), which was classified along with 61 others as a *Lagging* county. Lagging are those whose average annual employment growth rate fell under the statewide average both long-term (0.86%) and near-term (0.98%). However, Sangamon's performance places it on the cusp of the Lagging classification.



MAP 5.2: Employment Growth by County vs. Statewide Average, 1970-2013 and 2013

Source: IL-REAP

This is shown on **Figure 5.8**, below. As with the other LSGL analyses provided in this report, the graph displays the 102 counties of Illinois as dots on a scattergram, with the vertical axis representing the average annual employment growth rate over the long-term period (1970-2013), and the horizontal axis representing the employment growth rate for the near-term (2013). Sangamon is shown as the red dot marked 29 on the cusp between a Slipping and Lagging classification.

This figure sets apart those counties whose long-term employment growth exceeded the statewide average of 0.86%, by portraying them in the top two quadrants demarcated at 0.86% on the vertical axis. Counties whose long-term average annual employment growth rate trailed the statewide average (0.86%) are distributed in the bottom two quadrants. In all, 30 counties surpassed the statewide average over 1970-2013, while 72 counties fell below.

Similarly, the two quadrants on the right of this figure present the positions of the 20 counties whose most recent (2013) employment growth rate exceeded the statewide average (0.98%). The two quadrants on the left feature those 82 counties whose employment growth over 2013 trailed the statewide average. Accordingly, each quadrant portrays the performance of all 102 counties corresponding with their long-term (1970-2013) and near-term (2013) performance relative to their respective statewide averages of 0.86% over 1970-2013 and 0.98% over 2013.

Along with Sangamon, Champaign and McLean, the other counties classified as Slipping were: Clinton, Coles, Cumberland, DeKalb, Edwards, Effingham, Jackson, Jersey, Jo Daviess, Johnson,

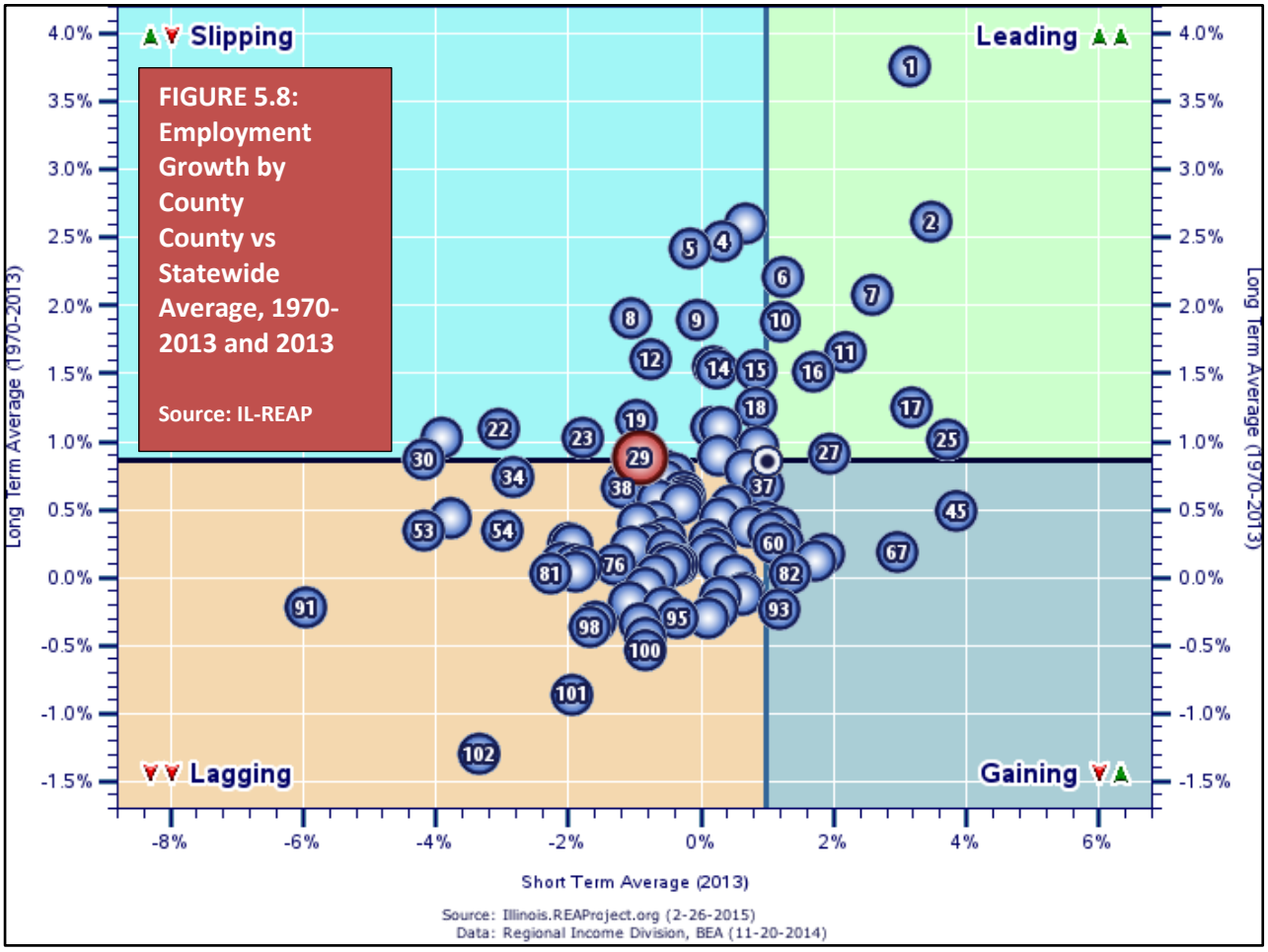


FIGURE 5.8: Employment Growth by County County vs Statewide Average, 1970-2013 and 2013

Source: IL-REAP

Kendall, McHenry and Monroe.

The reader will note that there appears to be no real geographic or geopolitical basis for this result as these counties are scattered throughout the state, as Map 5.2 shows.

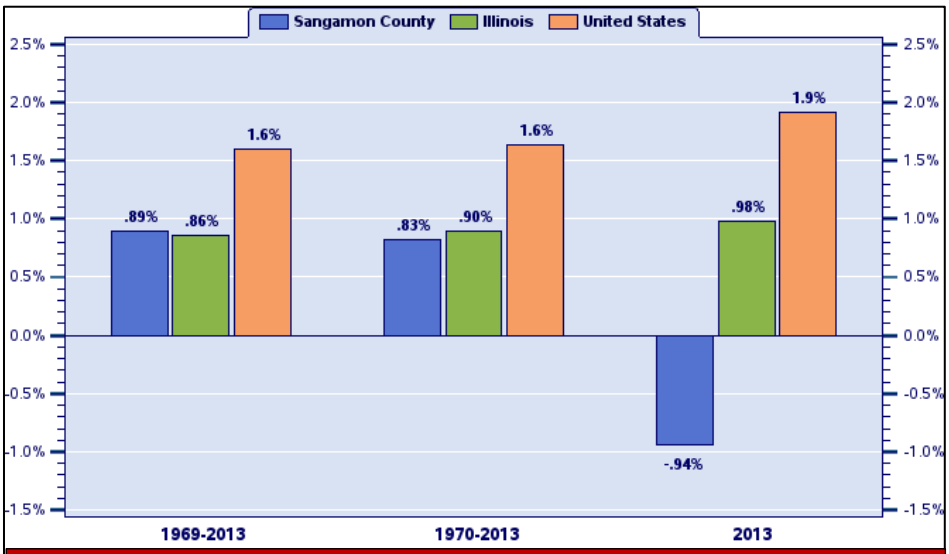


FIGURE 5.9: Sangamon County Employment Growth Compared to the State and Nation, 1969-2013 and 2013 Source: IL-REAP

As with population, while Sangamon's categorization as Slipping is not as negative as one might suppose it would be to be classified as Lagging, it is still cause for concern, particularly given its near proximity to a Lagging classification. In this regard **Figure 5.9** is informative.

This graph provides a comparison between the average annual employment growth in Sangamon County and the State and nation for the period 1969-2013, as well as for the most recent year for which data is available, 2013. Over this entire period the Sangamon economic area slightly exceeded the state average but fell well below the national one. If, however, we take 1969 out of the calculation, looking at the

TABLE 5.4: Sangamon County and Illinois, Total Employment, 2004-2013

	Sangamon County						Illinois					
Year	Jobs	Index	% Change	% State Total	Job Ratio: Jobs ÷ Population	Job Ratio: % of U.S. Avg.	Jobs	Index	% Change	% of Nationwide Total	Job Ratio: Jobs ÷ Population	Job Ratio: % of U.S. Avg.
2004	127,754	100.0	-0.08	1.76	0.67	115.33	7,251,642	100.0	0.75	4.29	0.58	99.77
2005	128,331	100.5	0.45	1.75	0.67	114.21	7,338,175	101.2	1.19	4.25	0.58	99.66
2006	127,485	99.8	-0.66	1.71	0.66	111.72	7,455,643	102.8	1.60	4.23	0.59	99.90
2007	127,274	99.6	-0.17	1.68	0.66	109.85	7,588,472	104.6	1.78	4.22	0.60	100.09
2008	125,340	98.1	-1.52	1.66	0.64	108.75	7,566,816	104.3	-0.29	4.21	0.59	100.48
2009	124,284	97.3	-0.84	1.70	0.63	111.54	7,325,871	101.0	-3.18	4.20	0.57	100.79
2010	123,840	96.9	-0.36	1.71	0.63	111.90	7,251,630	100.0	-1.01	4.19	0.56	100.96
2011	125,222	98.0	1.12	1.70	0.63	111.27	7,378,418	101.7	1.75	4.19	0.57	101.44
2012	124,125	97.2	-0.88	1.67	0.62	109.32	7,434,691	102.5	0.76	4.16	0.58	101.40
2013	122,964	96.3	-0.94	1.64	0.62	107.09	7,507,203	103.5	0.98	4.12	0.58	101.07

Index based upon 2004 = 100
Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1400_1000_PSN)

period 1970-2013, the region falls below the state average. This shows how employment rate changes in even one year can make a long-term difference. Even so, this change does not explain the large drop compared to the state and nation in 2013.

For this reason the SSCRPC looked to see if 2013 represented an outlier instead of an indication of how the longer-term job growth trends described earlier in this section might be reflected in declining job growth in more recent years. **Table 5.4** helps answer this question. This table provides an indexed comparison, based upon 2004 total employment data, for both Sangamon County and Illinois as a whole. We have highlighted the 2007-2009 recession period.

Looking only at Sangamon County, one finds that the decline in employment growth in 2013 does not represent a unique event, as employment declined in eight of the 10 years shown in the table. Only two years, 2005 and 2011, was the percentage of change a positive number.

On an indexed basis, employment during this 10-year period fell almost four index points in the economic area: declining from 100 to 96.3. At the same time, however, state-wide employment showed positive gains: increasing from 2004 index of 100 to 103.5 in 2013.

Granted that the Springfield-Sangamon economic area showed declines during the recession period of 2007-2009, but it also showed declines in two of the previous three years prior to the recession, and three of the four years following it. The state as a whole, on the other hand, shows only three years of decline; during two years of the recession and in the year immediately following it.

There is some revealing, and better, news presented in Table 5.4, however. Attention should be given to the "Jobs Ratio" provided in the table. This calculation indicates the ratio of jobs to the total population of the county as

TABLE 5.5: Job Growth Index, Sangamon Compared to Champaign, McLean and Peoria Counties as well as Illinois, 2004-2013

	Sangamon County		Champaign County		McLean County		Peoria County		Illinois	
Year	Index	Job Ratio: Jobs ÷ Population	Index	Job Ratio: Jobs ÷ Population	Index	Job Ratio: Jobs ÷ Population	Index	Jobs Ratio: Jobs ÷ Population	Index	Jobs Ratio: Jobs ÷ Population
2004	100.0	0.67	100.0	0.66	100.0	0.69	100.0	0.66	100.0	0.58
2005	100.5	0.67	99.9	0.65	100.9	0.69	100.9	0.67	101.2	0.58
2006	99.8	0.66	100.6	0.65	101.9	0.68	103.2	0.68	102.8	0.59
2007	99.6	0.66	102.5	0.65	103.4	0.68	105.9	0.69	104.6	0.60
2008	98.1	0.64	102.7	0.65	103.9	0.68	105.8	0.69	104.3	0.59
2009	97.3	0.63	101.0	0.63	102.5	0.66	101.1	0.65	101.0	0.57
2010	96.9	0.63	99.2	0.62	101.7	0.65	100.8	0.65	100.0	0.56
2011	98.0	0.63	98.8	0.61	102.4	0.65	103.0	0.67	101.7	0.57
2012	97.2	0.62	98.7	0.61	103.5	0.66	104.4	0.67	102.5	0.58
2013	96.3	0.62	99.6	0.61	102.4	0.64	103.2	0.66	103.5	0.58

Indexed to 2004 = 100

Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1400_1000).

well as the state.

In 2004, the Sangamon economic area was able to provide 67 jobs for every 100 residents, a quite respectable number given that the state's ratio at that time was only 58 jobs per 100 residents. By 2013, the Sangamon area's job ratio had fallen to only 62 jobs per 100 residents, but the state remained at 58, or 4 jobs fewer.

How does this recent performance compare to the other three peer areas, remembering that IL-REAP's analysis classified two (Champaign and McLean) as Slipping and one (Peoria) as Lagging? **Table 5.5** provides this data and confirms the analysis.

This table provides comparative data indexed to 2004. Based upon these results:

- Champaign County fell only slightly from 2004 to 2013, dropping to a 2004 indexed value of 99.6 compared to Sangamon's 96.3. It also provided fewer jobs per capita in 2013 than in 2004, dropping from 66 per 100 to 61 per 100. Given than its index value fell only marginally, reduction in its jobs ratio may have been due to population growth.

- McLean County showed an increase in its job growth index, going from 100 in 2004 to 102.4 in 2013. Its jobs to population ratio fell noticeably, however, dropping from 60 per 100 to 64. Again, this may be due to population growth over the period.

- Peoria's growth index also grew during the period, going from 2004 indexed value of 100 to 103.2 in 2013. However its jobs ratio remained static, beginning the period at 66 jobs per 100 and retaining that at the end of the period.

Overall, the state and the three peer counties performed noticeably better than the Sangamon economic area in regards to their 2004 indexed performance over the 10-year period, yet none of these counties performed as well as the state as a whole.

- Illinois: 103.5;
- Peoria: 103.2;
- McLean: 102.4;
- Champaign: 99.6;
- Sangamon: 96.3.

However, all of the counties performed better than the state as a whole in terms of their jobs ratio.

- Peoria: 0.66;
- McLean: 0.64;
- Sangamon: 0.62;
- Champaign: 0.61;
- Illinois: 0.58.

These results are notable and additional study should be done to assess these basic differences. The SSCRPC suspects that they are influenced by population differences (noted in Section 3 of this report), as well as differences in size of the interacting labor and market areas (addressed in Section 2), and differences in business and industry mix. This final item will be further addressed in the next section of this report.

Overall, the results indicate an erosion of job growth over time in the Sangamon economic area.

6. Trends in Business Growth in the Economic Area

The previous sections of this report addressed several major areas relevant to planning for long-term economic growth in the region, but any study of this type would be incomplete absent an assessment of the performance of the business and industry base itself.

Unfortunately the measures most often used by localities to assess such performance, job growth rates and unemployment rate changes, tend to assess events over rather short periods of time and often lack peer comparisons. Since these two metrics *are* used, we provide them below in **Figures 6.1 and 6.2** for the period 2002 to 2014 based upon analysis provided by the National Association of Counties' (NACO) *County Economic Tracker*[48]. The data used by NACO is distilled from several sources[49], and the graphs show changes in the unemployment and jobs growth rates for Sangamon County, in yellow, compared to the economies of similar counties in the nation, which are shown in blue. The graphs also show the peak values for both, as well as the recovery period following the end of the latest U.S. recession, which is shaded in light blue.

In terms of unemployment rate change, the graph shows the Sangamon economic area performing better than comparable counties throughout most of the period, but falling below in more recent years. The SSCRPC believes that this may lend credence to the long held belief that Sangamon County tends to mirror the tendency of Illinois as a whole to enter recessions later than most other parts of the country, and then lag behind them in speed of recovery. Looking *only* at Sangamon County unemployment data compared to other Illinois counties does not help identify such a dynamic.

However, while the unemployment rate change is positive overall when compared to like

Figure 6.1: Sangamon County Unemployment Rate Change, 2002-2014. Source: NACO

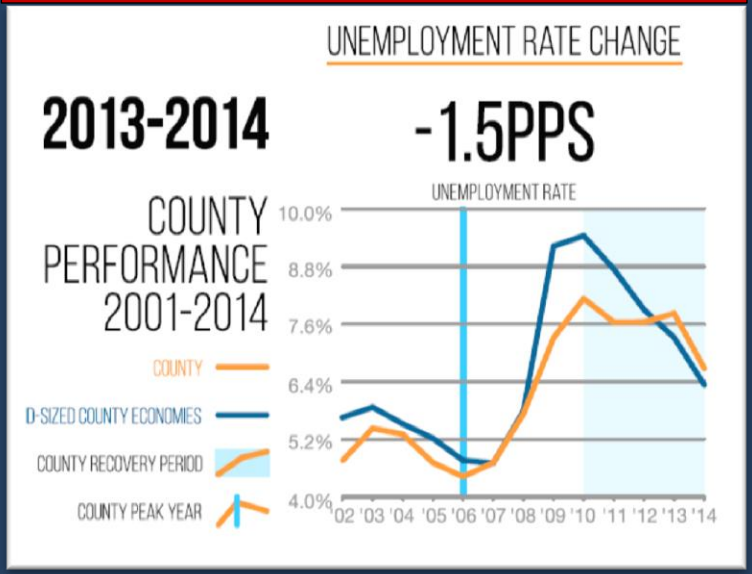
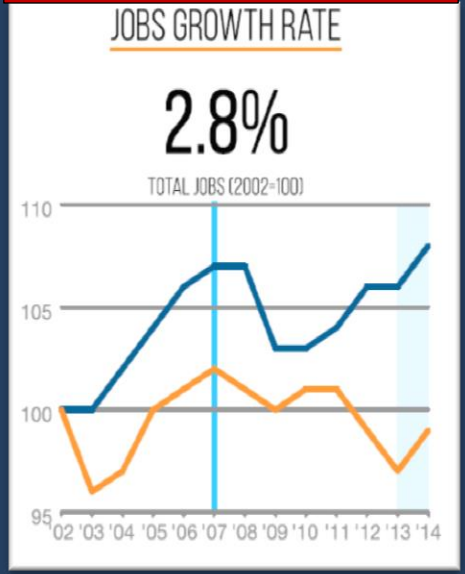


Figure 6.2: Sangamon County Jobs Growth Rate, 2002-2014



counties nationwide, the jobs growth rate chart is not. As it indicates, while the area saw a 2.8% growth in jobs between 2002 and 2014, this rate lagged behind comparison counties.

Given the direct relationship between the growth of business enterprises and the growth of jobs available from those enterprises, we are led to a consideration of business establishment growth in the area. That is, has the number of businesses increased or decreased over the years, and if there have been changes, in which sectors of the regional economy?

Growth in Business Establishments

Table 6.1 on the next page provides a review of business establishment growth or decline in the Sangamon economic area from 1998 to 2012, both in total number of establishments and by type of establishment. As much as the SSCRPC might have liked to look at a longer time frame in considering business growth trends, the data provided is limited to a 1998 beginning date as in 1997 a shift was made in reporting business data, going from the Standard Industrial Classification (SIC) system to the North American Industry Classification System (NAICS) in that year. The data presented in this section will be limited to the more recent years for which NAICS has been in place in order to provide for better comparability across these years.

As Table 6.1 shows, the region lost 300 businesses between 1998 and 2012, a decline of 5.6%. In itself, a decline in the number of establishments may not be the primary variable responsible for a decline in job growth if larger employers are simply replacing smaller ones. For example, this may be due to some industry sectors contracting while others expand. For this reason we have tinted the rows showing those sectors with a 5% or higher increase in the number of establishments over the period in green, and those showing a 5% or greater decrease in yellow. To help identify the effects of the recent recession on establishment growth or decline, those years are tinted grey.

Of the 20 industry sectors for which full data is provided, half show decline of 5% or more in number of establishments over the period, five show growth of that amount or more, and five showed neither growth nor decline outside the 5% range. Of the five showing growth, only one – Accommodation & Food Services – represents a sector with a large number of enterprises overall, with the others being relatively small in number (see **Table 6.2**).

Table 6.2: Sectors Showing 5% or More Growth or Decline, 1998-2012

	Industry Sectors	Number in 2012
Growth of 5% or More	Forestry, fishing, hunting & agricultural support.	5
	Utilities	15
	Management of companies & enterprises	36
	Arts, entertainment & recreation	89
	Accommodation & food services	523
Decline of 5% or More		
	Mining	6
	Construction	492
	Manufacturing	111
	Wholesale trade	232
	Retail trade	761
	Information	100
	Educational services	57
	Healthcare and social assistance	441
	Other services (except public administration)	708
	Unclassified	6

TABLE 6.1: Total Number of Business Establishments in Sangamon County by NAICS, 1998-2012

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TOTAL	5,357	5,350	5,363	5,275	5,313	5,363	5,350	5,362	5,347	5,325	5,273	5,140	5,140	5,096	5,057
Forestry, fishing, hunting, and agriculture support	3	4	2	3	9	8	6	5	6	8	7	6	8	7	5
Mining	9	9	8	5	7	6	8	8	7	6	7	6	7	6	6
Utilities	12	13	14	15	14	12	13	13	11	11	10	13	14	15	15
Construction	557	543	516	504	515	517	537	531	528	537	541	513	506	505	492
Manufacturing	132	130	127	128	127	131	130	134	130	119	113	112	113	112	111
Wholesale trade	270	261	269	260	232	232	235	232	225	218	218	226	235	228	232
Retail trade	830	828	844	843	819	839	821	822	830	811	776	750	754	773	761
Transportation & warehousing	99	99	105	94	96	111	112	113	121	121	128	121	114	113	99
Information	106	120	121	130	121	128	116	114	122	113	115	116	120	112	100
Finance & insurance	373	370	369	348	376	373	388	383	374	406	398	400	378	380	369
Real estate & rental & leasing	206	211	190	190	209	204	215	217	216	225	229	213	204	209	209
Professional, scientific & technical services	533	525	520	540	601	615	611	622	618	595	573	559	560	531	536
Management of companies & enterprises	29	31	31	34	35	33	34	35	32	38	33	36	36	36	36
Admin, support, waste mgt., remediation services	276	274	279	271	251	255	262	270	265	260	276	258	266	254	262
Educational services	59	63	61	57	63	57	60	63	66	67	59	59	57	57	57
Health care and social assistance	471	477	484	480	475	485	477	466	474	462	462	461	449	449	441
Arts, entertainment & recreation	79	76	77	82	87	87	88	81	83	80	84	84	84	81	89
Accommodation & food services	493	493	505	498	505	508	495	513	521	522	530	509	527	522	523
Other services (except public administration)	769	757	784	746	752	743	728	735	712	723	712	696	698	697	708
Auxiliaries (exc. corporate, subsidiary & regional mgt.)	6	8	8	7	5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Unclassified establishments	45	58	49	40	14	19	14	5	6	3	2	2	10	9	6

Data Source: U.S. Bureau of the Census, County Business Patterns.
Data limited to 1998 as shift was made from Standard Industrial Classification (SIC) to North American Industry Classification System (NAICS) in 1997. "NR" indicates no data reported for this NACIS classification for this year.
Green tinted rows indicate 5% or higher increase in number of establishments over period, orange indicates similar decrease. Three recession years are indicated by tinted columns (2007-2009).

Of the 10 showing decline, all but Educational Services and Unclassified establishments represent sectors with noticeably large numbers of enterprises, and some reductions in the number of businesses over this period most likely arose from business consolidations (e.g., "big box" stores taking trade away from smaller retail establishments), losses due to changes in the national marketplace (e.g., mining), and due to the recession. Indeed, most of the sectors losing establishments begin to display this trend beginning in 2007 and over the following years. However four sectors (Mining, Construction, Wholesale Trade, and Other Services) were showing palpable losses prior to the recession.

Related to the gain or loss of establishments, we believe that it is particularly important to consider the degree to which large and small businesses make up the local economic mix, as small businesses – particularly in areas such as Retail Trade and Construction – can be affected mightily by an economic downturn.

TABLE 6.3: Sangamon County Small and Large Establishment Ratio, 2000-2012		
Year	Sangamon County Small Establishments per 10,000 Workers	Sangamon County Large Establishments per 10,000 Workers
2000	543.31	1.07
2001	534.40	1.32
2002	552.98	1.10
2003	554.63	1.22
2004	555.98	1.47
2005	557.97	1.34
2006	546.96	1.44
2007	535.33	1.18
2008	532.34	1.31
2009	530.52	1.09
2010	535.99	1.10
2011	530.59	1.35
2012	516.21	1.32
Source: U.S. Bureau of the Census		

Table 6.3 displays the ratio of number of small and large businesses to the number of workers in the Sangamon economic area. As one might guess, the ratio is higher for small businesses than large, but the decline in small businesses is more noticeable than the increase in large ones. This is particularly relevant to comments made in Section 5 concerning the relationship between job growth and major employment components: primarily Wage and Salary vs. Nonfarm Proprietors employment.

Industry Earnings

Of course the earnings of businesses located in a region are also an indicator of the area's economic strength and its potential for long-term growth. **Table 6.4** on the following page considers total industry earnings in the Sangamon economic area from 1969 to 2013 in both current and constant dollars, and then indexes the percent of change for each year with 1969 as the index year.

IL-REAP reports that when measured in *current* dollars, the region's total industry earnings increased by 1,016.6% from $592 million in 1969 to $6,612 million in 2013. However, when measured in *constant* 2009 dollars adjusted for inflation, it advanced 121.7% from $2,779 million in 1969 to $6,161 million in 2013. **Figure 6.3** shows this growth.

Over the period considered, total industry earnings in Sangamon County more than doubled in constant dollars, going from the 1969 index of 100.0 to 221.7 in 2013. However,

Figure 6.3: Real Total Industry Earnings in Sangamon County, Current and Constant Dollars, 1969-2013 (Millions) Source: IL-REAP

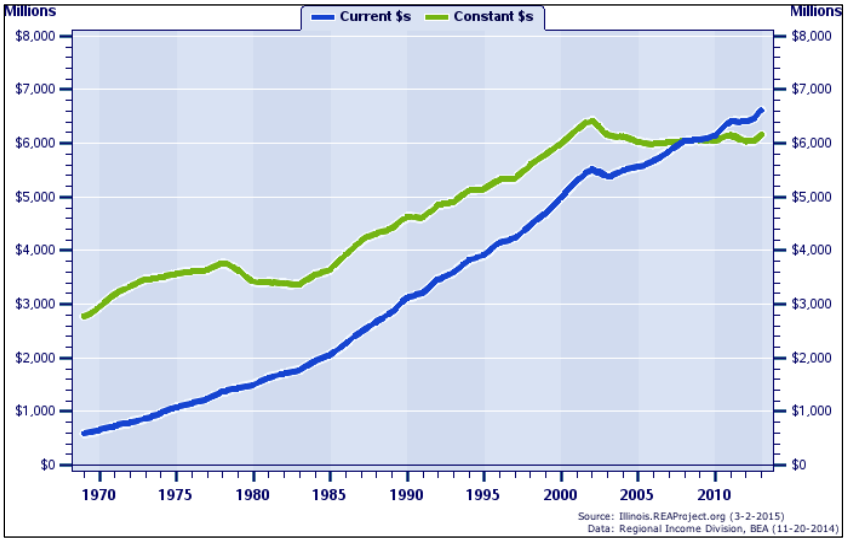


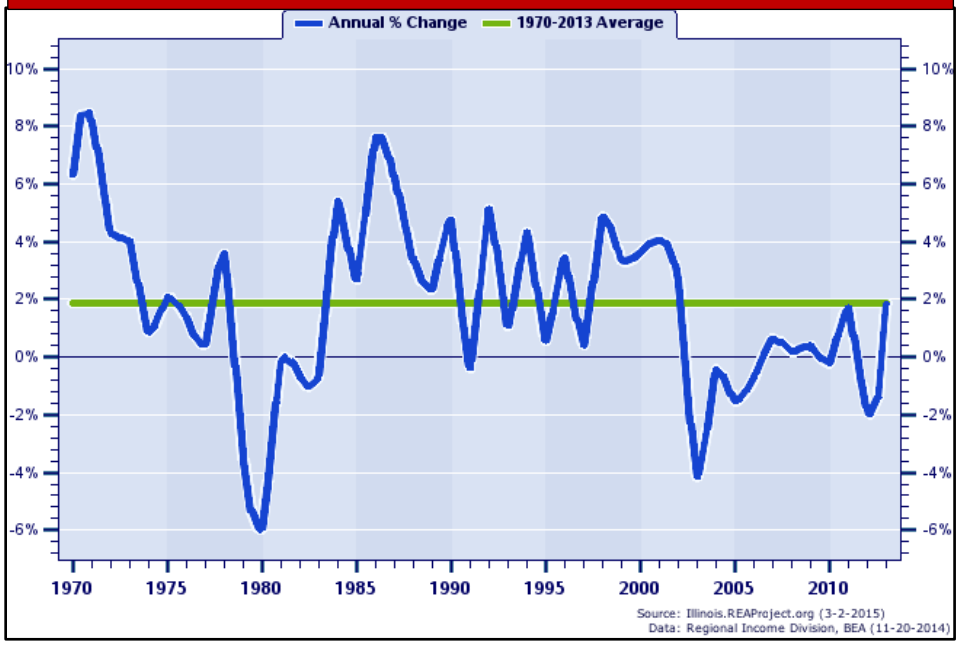
TABLE 6.4: Sangamon County, Total Industry Earnings, 1969-2013							
Year	Current Dollars (1000s)	Implicit Price Deflator*	Constant Dollars (1000s)	Index	% Change	% Statewide Total	State Rank
1969	592,206	0.213	2,778,614	100.0	0.00	1.44	11
1970	659,231	0.223	2,954,735	106.3	6.34	1.53	11
1971	743,415	0.233	3,196,247	115.0	8.17	1.62	11
1972	802,573	0.241	3,336,408	120.1	4.39	1.61	11
1973	879,905	0.254	3,470,752	124.9	4.03	1.58	11
1974	980,116	0.280	3,501,415	126.0	0.88	1.62	10
1975	1,083,948	0.303	3,573,848	128.6	2.07	1.69	10
1976	1,159,305	0.320	3,623,621	130.4	1.39	1.65	10
1977	1,240,481	0.341	3,640,336	131.0	0.46	1.60	10
1978	1,374,921	0.365	3,770,729	135.7	3.58	1.60	10
1979	1,445,824	0.397	3,642,241	131.1	-3.41	1.53	11
1980	1,506,430	0.440	3,426,898	123.3	-5.91	1.54	11
1981	1,636,104	0.478	3,420,593	123.1	-0.18	1.54	11
1982	1,715,353	0.505	3,398,084	122.3	-0.66	1.59	11
1983	1,778,794	0.527	3,378,334	121.6	-0.58	1.59	11
1984	1,945,662	0.546	3,560,549	128.1	5.39	1.56	11
1985	2,069,123	0.566	3,656,857	131.6	2.70	1.56	10
1986	2,274,670	0.578	3,935,007	141.6	7.61	1.62	7
1987	2,494,142	0.597	4,181,294	150.5	6.26	1.65	7
1988	2,679,746	0.620	4,323,984	155.6	3.41	1.63	7
1989	2,861,614	0.646	4,426,933	159.3	2.38	1.64	7
1990	3,126,854	0.674	4,636,498	166.9	4.73	1.69	7
1991	3,217,602	0.697	4,619,540	166.3	-0.37	1.70	7
1992	3,472,079	0.715	4,856,462	174.8	5.13	1.70	7
1993	3,597,801	0.733	4,909,730	176.7	1.10	1.69	7
1994	3,831,306	0.748	5,121,861	184.3	4.32	1.71	7
1995	3,933,761	0.764	5,151,869	185.4	0.59	1.67	7
1996	4,155,651	0.780	5,329,056	191.8	3.44	1.67	7
1997	4,245,491	0.793	5,351,886	192.6	0.43	1.60	7
1998	4,486,146	0.799	5,612,172	202.0	4.86	1.60	7
1999	4,705,109	0.811	5,800,899	208.8	3.36	1.58	7
2000	4,997,348	0.831	6,011,413	216.3	3.63	1.58	7
2001	5,300,475	0.847	6,255,281	225.1	4.06	1.62	7
2002	5,516,335	0.859	6,423,829	231.2	2.69	1.66	7
2003	5,392,424	0.876	6,157,703	221.6	-4.14	1.58	7
2004	5,499,339	0.897	6,130,608	220.6	-0.44	1.54	7
2005	5,570,561	0.923	6,037,829	217.3	-1.51	1.51	8
2006	5,677,932	0.947	5,993,869	215.7	-0.73	1.45	8
2007	5,857,323	0.971	6,032,134	217.1	0.64	1.44	8
2008	6,047,847	1.001	6,043,918	217.5	0.20	1.45	8
2009	6,067,630	1.000	6,067,630	218.4	0.39	1.53	8
2010	6,155,667	1.017	6,055,568	217.9	-0.20	1.54	8
2011	6,413,949	1.041	6,158,436	221.6	1.70	1.52	8
2012	6,417,015	1.061	6,050,249	217.7	-1.76	1.47	9
2013	6,612,426	1.073	6,160,664	221.7	1.82	1.47	9

For Index: 1969 = 100

*Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00). Real total industry earnings determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00). Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the Bureau of Economic Analysis, November 2014 .

the table and the graph are informative in other ways, pointing initially to three periods of change in the local economy.

Figure 6.4: Sangamon County Real Total Industry Earnings with Annual Rate of Change, 1970-2013 ource: IL-REAP



From 1969 to 1985, the county ranked either 10th or 11th among the other counties in its contribution to all earnings in the state. This ranking improved beginning in 1986 running through 2004, when it moved to the higher ranking of 7th. However starting in 2005, one begins to see a slight decline, falling to 8th, and then 9th in 2012-2013. Even with this decline the area remained in the top ten of all Illinois counties and above its rankings in the earlier years, but the more recent decline in industry earnings began *before* the most recent recession and may indicate a trend that should be closely considered in economic development planning.

Figure 6.4 considers this from a different perspective, showing the pattern of the area's real total industry earnings growth, as it tracks the year-to-year percent change from 1970 to 2013. The average annual percent change for the entire 44-year period is also show as a green line running horizontally through the graph, which IL-REAP provides as a benchmark to better indicate the periods of relative high and low industry earnings growth. On average, the area's real total industry earnings grew at an annual rate of 1.87% over the period, showing its highest growth in 1971 (8.17%) and lowest in 1980 (-5.91%). By 2013, the area's real total rate of industry earnings growth was only 1.82%, or nearly what its average rate of growth was over the entire period.

Again one can see the three periods mentioned above, with improvements during the mid-years and declines in more recent ones.

However, regions have all experienced periods of change over the past four decades, and these periods have often coincided with the decades themselves, as larger economic trends associated with each decade affect earnings at the regional level. **Figure 6.5** on the next page takes this into account, overlaying the decade industry earnings averages – rather than the average of the entire period – upon the earnings graph provided in Figure 6.4.

During the 1970s, the Sangamon economic area's annual real total industry earnings growth rate averaged 2.79%. This fell to 2.04% throughout the 1980s, rebounded to 2.76% during the 1990s, but then fell significantly to

Figure 6.5: Sangamon County Real Total Industry Earnings, Annual Percent Change and Decades Averages, 1970-2013 Source: IL-REAP

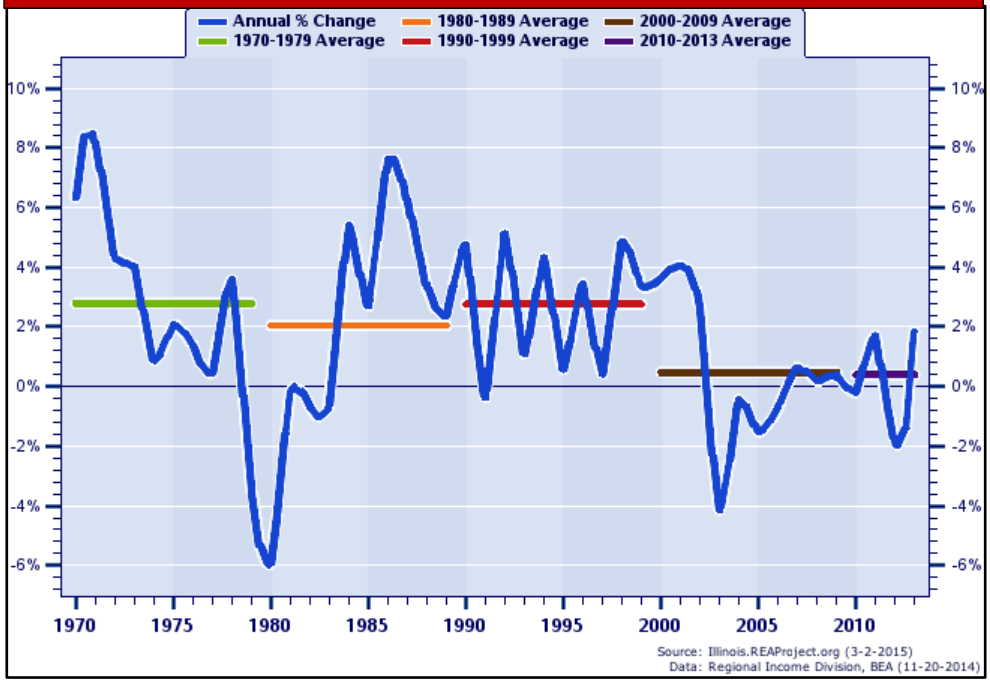
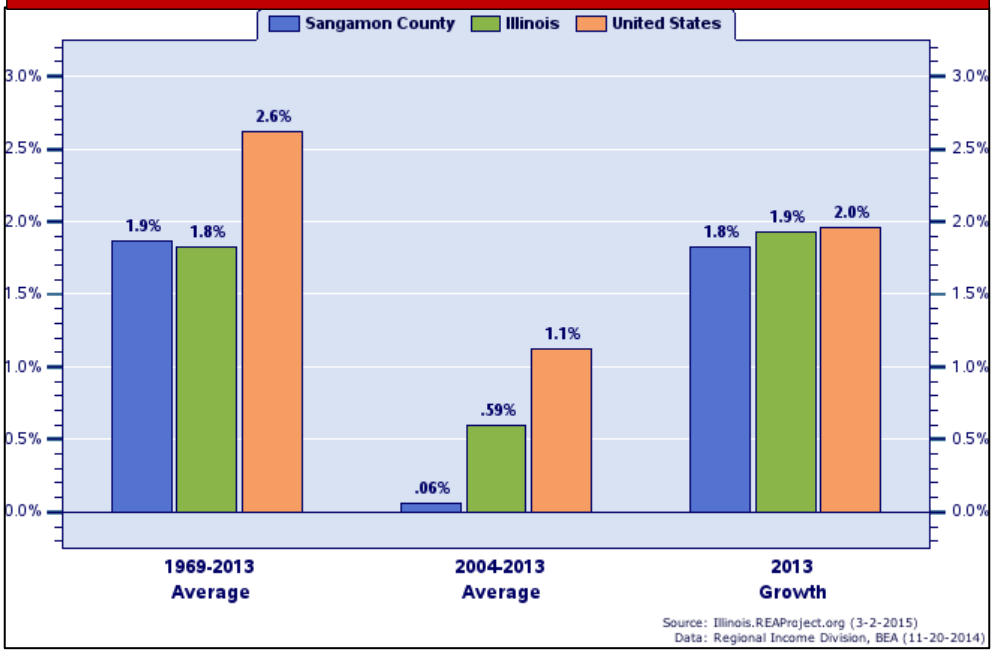


Figure 6.6: Sangamon County Real Total Industry Earning Growth, U.S. and Illinois Comparison Source: IL-REAP



0.48% during the last decade, and then again falling to 0.39% so far in this one. *Seen in this way, one finds that real industry earnings growth has continued to fall since the 1990s, and to do so noticeably.*

However, in the most recent year for which this data was available, 2013, the earnings growth of businesses in Sangamon County fairly mirrored industry earnings growth for both the state and nation.

Figure 6.6 provides an overview of total industry earnings growth, comparing 2013 with both the 1969-2013 and 2004-2013 averages. One notes that during the 1969-2013 period, the region lagged behind the national rate and slightly above the state one. However, for 2004-2013, which included the recession period, it noticeably lagged behind both the state and national rates. Only when 2013 growth is considered separately do we again see a similarity across these rates.

What is unresolved is whether or not this is an indicator of future improvement.

Earnings by Industry Sector

Previously we noted that the growth of business establishments in an area may be largely affected by the types of businesses located there: the industry sectors the businesses are in. For this reason the SSCRPC looked at several factors relevant to assessing potential economic development strategies by sector.

Table 6.5 provides an overview of real average earnings growth per job by industry sector for the 2002-2013. Since mention was made above concerning the difference in earnings growth rates when 2013 is compared to the entire 2002-2013 period, we provide the 2013 information separately.

In each case that a negative growth rate occurred, that case is indicated in red. For 2013 there were six sectors that out-performed the national rate: Farm, Construction, Finance & Insurance, Professional & Scientific, Administrative & Waste, and Health Care. However, eight out-performed the Local-National rate. Six out-performed the national average annual growth rate over the 2002-2013

Table 6.5: Real Average Earnings Per Job Growth by Major NAICS Industry for Sangamon County, 2013 and 2002-2013

Major NACIS Industry	2013 Growth			2002-2013 Growth		
	Growth Rate	National Growth Rate	Local - National Growth	Average Annual Growth Rate	National Average Annual Growth	Local - National Annual Growth*
Farm	111.34	13.42	97.92	26.86	7.82	19.03
Construction	5.42	2.42	3.00	0.25	0.32	-0.07
Manufacturing	-1.50	-0.72	-0.78	1.04	1.02	0.01
Wholesale Trade	-2.03	-0.02	-2.01	0.88	0.93	-0.05
Retail Trade	-2.66	1.08	-3.74	0.21	0.12	0.09
Information	0.63	3.30	-2.67	2.26	1.61	0.66
Finance and Insurance	2.48	-0.83	3.31	-0.58	-0.78	0.20
Real Estate and Rental and Leasing	1.72	3.58	-1.85	-6.98	-1.73	-5.25
Professional, Scientific, and Technical Services	4.05	-0.35	4.40	0.61	0.63	-0.02
Management of Companies and Enterprises	-4.90	0.51	-5.40	1.30	1.01	0.29
Administrative and Waste Services	4.65	-0.03	4.69	-0.19	0.54	-0.73
Educational Services	-8.64	-0.02	-8.62	1.69	1.15	0.54
Health Care and Social Assistance	-0.12	-1.64	1.53	1.53	0.64	0.89
Arts, Entertainment, and Recreation	-2.23	-1.10	-1.13	0.77	-0.49	1.26
Accommodation and Food Services	-1.51	-0.91	-0.60	0.80	0.24	0.56
Other Services (except Public Administration)	0.64	0.80	-0.17	-0.11	0.30	-0.41
Other/Suppressed Industries	-1.05	0.28	-1.33	U	U	
All Industries Average	2.79	0.04	2.75	0.55	0.49	0.07

Real rate is difference between the national growth rate and the growth in Sangamon County for each major industry. Real earnings determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).
The "Other/Suppressed Industries" category represents a combined total of those industries for which data were unavailable due to confidentiality restrictions. Those industries that are combined include: Forestry, Fishing, and Related Activities; Mining; Utilities; Transportation and Warehousing.
Note: Percent growth figures may not add due to rounding by a factor of ± 0.1%. Declines indicated in red.
Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1700NB)

period, with only limited matches between those in 2002-2013 and those in 2013 alone.

Since this assessment is based upon average earnings per job, one must remember that these earnings are lower for industries involving more part-time work (e.g., Accommodations & Food Services) than those involving more full-time work (e.g., Manufacturing), although there may be little differences between the wages of full-time employees.

In terms of industry stability and growth, the SSCRPC was also interested in assessing the status of industry sectors in the region in regard to three other factors: Location Quotient (LQ), Shift Share, and Component Contribution (CC).

Location Quotient helps gauge the extent to which various industries are more or less concentrated in an area than they are the nation at-large by considering the portion or jobs and/or earnings they contribute overall. This is not unimportant to economic development planning as one is typically interested in identifying *core* industries – those making up the largest portions of the local economy – as well as *driving* ones – those showing a pattern or trend toward additional growth. In considering economic development goals, a region will most often seek to hold its core industries while encourage additional growth among the driving ones. LQ helps begin to identify both groups and is also a useful way to assess the diversity of a region's business base since it helps to assess the concentration of industries by the degree to which they contribute to the area's workforce and earnings.

Table 6.6, on the next page, provides the LQ for industry sectors in Sangamon County offered by IL-REAP. If an industry's share of total earnings is the same as what that industry holds nationally, its LQ is equal to 1.00. If it is concentrated in a region, thus greater than one would find nationally, its LQ will be greater than 1.00. Equally, it will be less than 1.00 if the industry is less concentrated than found nationally. Given that the Sangamon economic area is home to a state capital and this generates a significant number of jobs, we included the public sector in this LQ analysis.

As the table shows, in 2013 only six sectors show concentrations at or above the national concentration (Farm; Finance & Insurance; Health Care & Social Assistance; Other Services; and both State and Local Government), while three come near to the national concentration (Retail Trade; Accommodation & Food Services; and Federal Civilian). This helps begin to identify the major, *core*, sectors that are job generators in the area. In this regard the three sectors showing the highest LQ are Farming (3.80), State Government (3.47) and Health Care & Social Assistance (1.95). None of these concentrations come as a surprise, although we were somewhat surprised by the lower LQ of Accommodation & Food Services given the area's convention and tourism base.

Of equally important note are three sectors that show little concentration: Manufacturing (0.31); Professional, Scientific & Technical Services (0.59); and Information (0.50). In the first case because Manufacturing is typically a major source of higher paying jobs, and in the latter two cases because these include classes of firms seen as being associated with long-term economic growth in the modern, technology-based economy. This finding is also informative for economic development planning purposes as both of these sectors show a lower LQ in

TABLE 6.6: Earnings Structure by Major NAICS Industry in Sangamon County, 2013 and 2001-2013
Source: IL-REAP

Major Industry	2013 Structure			2001-2013 Averages		2001-2013
	Earnings (1000s)	Percent of Total	Location Quotient	Percent of Total	Location Quotient	Shift Share
Farm Earnings	293,050	4.43	3.80	1.99	2.19	3.76
Construction	291,190	4.40	0.80	5.34	0.87	-1.95
Manufacturing	200,881	3.04	0.31	3.30	0.31	-0.33
Wholesale Trade	255,902	3.87	0.77	3.88	0.76	0.40
Retail Trade	384,376	5.81	0.97	6.03	0.95	0.07
Information	109,948	1.66	0.50	2.50	0.74	-1.21
Finance and Insurance	536,322	8.11	1.14	7.38	1.02	0.09
Real Estate and Rental and Leasing	49,947	0.76	0.36	1.19	0.62	-1.01
Professional, Scientific, and Technical Services	385,200	5.83	0.59	6.10	0.66	0.12
Management of Companies and Enterprises	70,022	1.06	0.40	1.06	0.45	0.16
Administrative and Waste Services	185,149	2.80	0.70	2.99	0.78	0.35
Educational Services	76,904	1.16	0.70	0.92	0.61	0.47
Health Care and Social Assistance	1,409,202	21.31	1.95	18.63	1.82	6.09
Arts, Entertainment, and Recreation	27,129	0.41	0.37	0.44	0.41	0.05
Accommodation and Food Services	191,786	2.90	0.93	2.86	0.95	0.33
Other Services (except Public Administration)	314,296	4.75	1.28	4.91	1.32	0.04
Federal Civilian	172,965	2.62	0.90	2.76	0.94	0.04
Military	18,629	0.28	0.21	0.27	0.19	0.11
State Government	825,065	12.48	3.47	15.39	4.24	-9.43
Local Government	650,235	9.83	1.07	9.60	1.01	1.54
Other/Suppressed Industries	164,228	2.48	0.41	2.44	0.43	0.30
Total Industry Earnings	6,612,426	100.00	1.00	100.00	1.00	0.00

Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1600NA)
The "Other/Suppressed Industries" category portrayed in this table represents a combined total of those industries for which data were unavailable due to confidentiality restrictions. Those industries that are combined include: Forestry, Fishing, and Related Activities; Mining; Utilities; Transportation and Warehousing
Note: Percent growth figures may not add due to rounding by a factor of ± 0.1%

2013 than they averaged over the 2001-2013 period.

Table 6.6 also provides the *shift share* for 2001-2013. Shift share is a type of regional analysis used to determine how much of regional job growth can be attributed to national trends and how much might be due to factors unique to the region. It is intended to help answer questions as to why one industry might be growing – or another not – by considering whether growth or decline is due to national rather than local conditions. This helps the economic development planner identify industries where a regional economy has competitive advantages – or disadvantages – over the larger economy.

The most notable finding is the decline in shift-share arising from State Government, as the negative shift-share (-9.43) in this sector

TABLE 6.7: Real Earnings Growth by Major NAICS Industry in Sangamon County, Including Component Contribution (CC), 2013 and 2002-2013

	2013 Growth				2002-2013 Growth			
Major Industry	Growth Rate	CC	National Growth Rate	Local - National Growth	Average Annual Growth Rate	CC	National Average Annual Growth	Local - National Annual Growth
Farm Earnings	101.63	2.27	13.68	87.95	24.17	0.30	6.59	17.58
Construction	9.10	0.37	5.83	3.27	-2.25	-0.13	-0.01	-2.24
Manufacturing	-2.57	-0.08	0.38	-2.95	-0.86	-0.03	-1.27	0.41
Wholesale Trade	0.15	0.01	1.52	-1.37	0.61	0.02	1.12	-0.50
Retail Trade	-4.20	-0.26	2.56	-6.76	-0.12	-0.01	0.19	-0.30
Information	-2.25	-0.04	4.22	-6.47	-4.06	-0.10	-0.20	-3.86
Finance and Insurance	3.84	0.31	0.90	2.94	0.71	0.04	1.12	-0.42
Real Estate and Rental and Leasing	2.57	0.02	5.25	-2.68	-6.61	-0.09	1.20	-7.81
Professional, Scientific, and Technical Services	-3.67	-0.23	1.54	-5.21	-0.16	-0.01	2.30	-2.46
Management of Companies and Enterprises	1.35	0.01	4.53	-3.19	1.51	0.01	3.00	-1.49
Administrative and Waste Services	-5.95	-0.18	2.53	-8.47	1.99	0.04	1.98	0.01
Educational Services	-5.66	-0.07	0.46	-6.12	4.97	0.04	4.05	0.91
Health Care and Social Assistance	0.37	0.08	2.52	-2.15	2.79	0.50	3.19	-0.40
Arts, Entertainment, and Recreation	0.01	0.00	2.17	-2.16	1.11	0.00	1.72	-0.61
Accommodation and Food Services	0.76	0.02	2.30	-1.53	0.47	0.01	1.88	-1.42
Other Services (except Public Administration)	-0.52	-0.03	2.48	-3.00	0.37	0.01	1.64	-1.27
Federal Civilian	-4.58	-0.13	-2.60	-1.98	0.13	0.00	2.18	-2.05
Military	-2.99	-0.01	-4.38	1.39	7.60	0.01	3.85	3.76
State Government	-0.50	-0.06	1.02	-1.51	-4.86	-0.88	1.52	-6.38
Local Government	-1.66	-0.17	0.64	-2.30	1.56	0.14	1.56	0.00
Other/Suppressed Industries	-0.72	-0.02	2.38	-3.10				
TOTAL INDUSTRY EARNINGS	1.82	1.82	1.96	-0.14	-0.11	-0.11	1.31	-1.42

Source: Calculations by the Illinois Regional Economic Analysis Project (IL-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, November 2014 (REAP_PI_CA1600NB)
"CC" identifies the Component Contribution.
The "Other/Suppressed Industries" category portrayed in this table represents a combined total of those industries for which data were unavailable due to confidentiality restrictions. Those industries that are combined include: Forestry, Fishing, and Related Activities; Mining; Utilities; Transportation and Warehousing.
Note: Percent growth figures may not add due to rounding by a factor of ± 0.1%. Real earnings determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).
Negative values expressed in red.

indicates it has declined more than it would have if it had simply followed national trends.

Lesser, but equally negative, shifts are seen in Construction, Manufacturing, Information, and Real Estate.

We also were interested in assessing the *Component Contribution* (CC) of each sector making up the regional economy. As the term implies, the component contribution isolates and records each sectors individual contribution to the total growth of earnings in the state.

Table 6.7, above, provides this information for both 2013 and 2002-2013. It also identifies sectors showing negative regional and national rates of real earnings growth during those periods.

During 2002-2013 the Sangamon economic area's contributions to the state's economy fell in six industry sectors (Construction; Manufacturing; Retail Trade; Information; Real Estate; and Professional, Scientific & Technical Services), following along with national growth rate declines in three (Construction, Manufacturing, Information.) The largest shift in component contribution occurred in state government, which shows a -0.88 for the period. Of course, since state government draws from the state's economy as a whole, some would argue that this was a positive economic event. It was not for the local economic area, however, so it is reported here as a notable loss.

There were some differences between the entire 2002-2013 period and 2013 alone, as two of the sectors (Construction, Real Estate) fared better, making more of a contribution to the statewide economy, while three others (Administrative & Waste Services, Educational Services, Other Services) fared worse.

While the tables above deal with NAICS sectors of the regional economy, it is not uncommon to consider the contribution that different groupings of industries make. **Figure 6.7**, for example, does this, looking at dollar value and share of Sangamon County economic output for what NACO classes as "specialized" industries. Another way to do this is to consider industry *clusters.*

Industry Clusters

Both research and experience tell us that businesses tend to "cluster" near one another. For example, producers often want to be near their suppliers and suppliers want to be near the producers that buy from them. An industry cluster is different from the industry sectors that provide the basis for the analysis above because they include the entire mix of businesses that make up the product value chain: suppliers, producers, specialized service providers, and even the supporting commercial infrastructure. For the purposes of economic development planning, an industry cluster may be thought of as a group of geographically concentrated, inter-connected and inter-related businesses that drive wealth creation in an area.

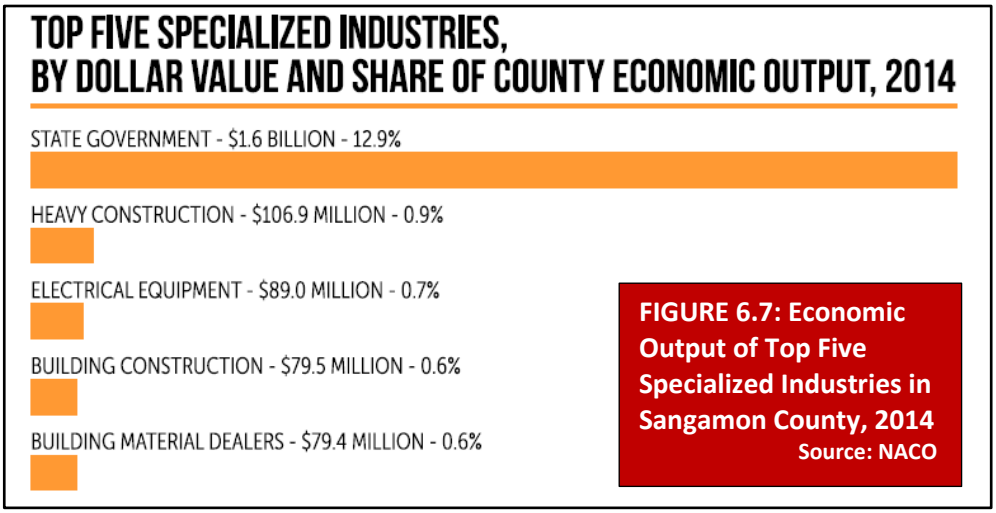


FIGURE 6.7: Economic Output of Top Five Specialized Industries in Sangamon County, 2014
Source: NACO

They are important because they are more-and-more seen as making up the building blocks of the modern economy, helping to

drive regional economic performance, job growth, wage improvement and innovation.[50]

They can also help the economic development planner arrive at a better profile of the economy in an area than industry sectors might, as they provide "a richer, more meaningful representation of local industry drivers and regional dynamics than do traditional methods."[51]

Table 6.8 shows the number of establishments in the economic area by industry cluster from 2001 to 2012. The most recent recession period is indicated by shading 2007-2009.

TABLE 6.8: Sangamon County Industry Clusters, Number of Establishments, 2001-2012

Cluster	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total All Industries	4,962	4,982	5,058	5,082	5,146	5,207	5,246	5,235	5,262	5,301	5,301	5,295
Advanced Materials	14	25	24	53	56	54	46	46	40	39	35	33
Agribusiness, Food Processing & Technology	41	43	46	64	65	65	61	65	65	69	73	78
Apparel & Textiles	16	13	14	30	30	28	39	38	31	32	27	25
Arts, Entertainment, Recreation & Visitor Industries	98	94	104	138	139	143	143	144	146	141	138	134
Biomedical/Biotechnical (Life Sciences)	109	121	119	151	166	170	175	175	178	186	191	188
Business & Financial Services	652	680	775	856	862	879	902	896	873	881	881	878
Chemicals & Chemical Based Products	4	5	4	38	38	38	35	35	29	28	25	24
Defense & Security	106	106	147	181	180	180	178	181	180	180	178	174
Education & Knowledge Creation	30	40	42	73	77	79	76	75	75	76	73	82
Energy (Fossil & Renewable)	136	119	150	196	206	195	186	179	181	188	184	182
Forest & Wood Products	12	0	0	32	31	29	27	24	27	28	27	26
Glass & Ceramics	0	0	0	8	8	8	9	8	8	7	5	4
Information Technology & Telecommunications	129	127	177	228	216	214	200	196	192	197	193	179
Transportation & Logistics	86	84	90	113	112	124	121	121	130	131	120	119
Manufacturing Supercluster	0	0	0	32	32	35	34	35	37	38	29	29
■ **Fabricated Metal Product Mfg.**	0	0	0	9	8	8	8	11	10	1	11	12
■ **Machinery Mfg.**	0	0	0	8	9	9	8	9	11	11	5	5
■ **Computer & Electronic Product Mfg.**	0	0	0	8	9	11	11	8	9	8	8	7
■ **Electrical Equipment, Appliance & Component Mfg.**	0	0	0	4	3	4	4	4	4	5	3	3
■ **Transportation Equipment Mfg.**	0	0	0	3	3	3	3	3	3	3	2	2
Mining	0	0	0	4	4	4	4	4	4	3	3	3
Printing & Publishing	75	82	82	108	111	115	127	123	115	117	122	120

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development.
Shaded 2007-2009 indicates most recent recession period.

Reviewing the Sangamon economy by cluster provides some more positive results than by industry sector. All of the clusters that make up the regional economy showed growth in the number of establishments over the period, although several (e.g., Advanced Materials, Business & Financial Services) were significantly affected by the recession. Some continued to grow throughout it (e.g., the Biomedical and Biotechnical cluster).

In terms of number of establishments, the top five clusters are listed in Table 6.9, which shows numbers for both 2001 and 2012. These five clusters made up 30% of all establishments in the economic area in 2012, slightly more than a 40% increase over 2001.

As one of the larger clusters, Defense & Security, may come as a surprise to some, we need to point out that this cluster as defined by the Purdue University Center for Regional Development includes a number enterprises that one would not normally associate with "defense" industries but which exist in Sangamon County. They include such businesses as[52]:

- Power and communication line and related structures construction.
- Aircraft related support.
- Automobile and other motor vehicle parts and suppliers as well as transportation equipment and supplies.
- Custom computing programming services, computer systems design services, computer facilities management services.

This cluster also includes various public safety and criminal justice-related enterprises – including courts, correctional institutions, and parole offices – as well as activities one would typically find in a state capital, such as those associated with the regulation and administration of transportation programs.

While, as **Table 6.9** indicates, the economic area has seen an increase in the number of establishments that make up the five major clusters, it does not describe whether or not the area has seen as increase in employment growth arising from them.

TABLE 6.9: Sangamon County Top Five Industry Clusters, Number of Establishments and Establishment Growth or Decline, 2001 vs 2012

	2001		2012		Total Increase or Decrease	% Increase or Decrease Over 2001
Total Number Establishments	4,962		5,295		333	6.7%
Top Five Regional Clusters by Number of Establishment	Number	% All Establishments*	Number	% All Establishments*		
Biomedical/Biotechnical (Life Sciences)	109	2.2	188	3.6	79	72.5%
Business & Financial Services	652	13.1	878	16.6	226	34.7%
Defense & Security	106	2.1	174	3.3	68	64.2%
Energy (Fossil & Renewable)	136	2.7	182	3.4	46	33.8%
Information Technology & Telecommunications	129	2.6	179	3.4	50	38.8%
CLUSTER TOTAL	1,132	22.8%	1,601	30.2	469	41.4%

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development. * May not equal 100 due to rounding.

TABLE 6.10: Sangamon County Top Five Industry Clusters, Employment and Employment Growth or Decline, 2001 vs 2012

	2001		2012		Total Increase or Decrease	% Increase or Decrease Over 2001
TOTAL EMPLOYMENT	145,195		127,758		-17,437	-12.0%
Top Five Regional Clusters by Employment	Number	% All Employment*	Number	% All Employment*		
Biomedical/Biotechnical (Life Sciences)	13,557	9.3	13,019	10.2	-538	-4.0%
Business & Financial Services	9,886	6.8	8,278	6.5	-1,608	-16.3%
Defense & Security	27,679	19.1	17,037	13.3	-10,642	-38.4%
Information Technology & Telecommunications	4,592	3.2	a	a	a	a
Arts, Entertainment, Recreation & Visitor Industries	3,693	2.5	2,553	2.0	-1,140	-30.9%
Energy (Fossil & Renewable)	a	a	3,213	2.5	a	a
CLUSTER TOTAL	59,407	40.9%	44,100	34.5	-15,307	-25.8%

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development. * May not equal 100 due to rounding. "a" indicates this cluster was not in the top five clusters for the year noted.

Table 6.10, above, lists the five top clusters based upon employment.

The reader will first note a change in the listing, with the Arts, Entertainment, Recreation & Visitor Industries now entering the top five, and Information Technology dropping, switching positions in the top five with Energy.

By 2012, the five clusters indicated made up almost 35% of all employment in the economic area, however, there was a decrease of 17,437 jobs (12.0%) within all clusters. Within the four clusters that were in the top five for both 2001 and 2012 – Biomedical, Business & Financial, Defense & Security, and Arts & Entertainment – there was a loss of 13,928 jobs, or almost 80% of the total loss for all clusters. The vast majority of this loss came from the Defense & Security cluster, which dropped by over 10,000 jobs. This should not come as a surprise given the relationship of this sector to government spending.

Most of the declines seen in these clusters can be attributed to the effects of the Great Recession, but the SSCRPC believes that they demonstrate how dependent the area is on a small number of clusters for job creation, helping validate its earlier work looking at the region's economic resiliency.

This data may also be misleading due to the changes in the clusters considered in the top five groupings. As noted above, when employment – rather than number of establishments – was used to identify a top five, Arts, Entertainment, Recreation & Visitor Industries became part of the group, and Information Technology and Energy changed places, since Information Technology was no longer in the top five by 2012.

In addition, the SSCRPC felt that while the number of establishments and employment were both valid factors for assessing the strength of the areas industry clusters, both assumed that all establishments and jobs were equal. As previously mentioned, we know that they are not. Some industries pay at higher wage rates than others, some use more part-

time employees than others, and so forth. For this reason **Table 6.11** is provided, which indicates the top five industry clusters in the economic area by total wages.

Not surprisingly, the top five clusters based upon total wages is the same group as that for number of establishments.

In 2001, these five clusters made up slightly more than 50% of total wages paid by all of the clusters in Sangamon County, so are clearly core in that regard. By 2012 this share had fallen to 43%, largely due to the wage growth in these five clusters lagging behind wage growth by clusters in the region as a whole (2.5% vs. 19.9%). As Table 6.11 indicates, two of the Sangamon clusters performed very well and significantly above the average for the period: Biomedical/Biotechnical, where total wages increased 45.8%; and Energy, where total wages increased 28.0%. Unfortunately two clusters saw a decline in wages (Defense & Security, and Information Technology), while a third (Business & Financial Services) lagged behind the clusters as a whole.

The data presented above seems to provide some targeting data for economic development planning. Both in terms of number of enterprises and total wages, the top five regional clusters listed in the Tables 6.9 and 6.11 appear to be core industries in the economic area worthy of particular consideration for planning purposes.

Surprisingly one of the clusters of industries that one might think would logically be included on this list – tourism – is not. In large part this is due to tourism/visitor travel neither being viewed as a standard industry sector, nor a cluster. For these reasons it is not possible to look at specific data for this trade grouping in a traditional way. We may draw some conclusions from the Arts, Entertainment, Recreation & Visitor Industries cluster in which it is embedded, however.

For example, the reader will remember that Location Quotient (LQ) helps gauge the extent to which an industry is more or less

TABLE 6.11: Sangamon County Top Five Industry Clusters, Total Wages and Wages Growth or Decline, 2001 vs 2012

	2001		2012		Total Increase or Decrease	% Increase or Decrease Over 2001
TOTAL WAGES	$5,264,607,644		$6,313,765,201		$1,049,157,557	19.9%
Top Five Regional Clusters by Wages	Wages	% All Wages*	Wages	% All Wages*		
Biomedical/Biotechnical (Life Sciences)	$425,888,826	8.1	$621,107,307	9.8	$195,218,481	45.8%
Business & Financial Services	$555,260,510	10.6	$601,036,848	9.5	$45,776,338	8.2%
Defense & Security	$1,260,530,210	23.9	$1,119,298,986	17.7	-$87,231,224	-6.9%
Energy (Fossil & Renewable)	$158,966,532	3.0	$203,426,262	3.2	$44,459,730	28.0%
Information Technology & Telecommunications	$248,188,339	4.7	$170,783,709	2.7	-$77,404,630	-31.2%
CLUSTER TOTAL	$2,648,834,417	50.3	$2,715,653,112	43.0	$66,818,695	2.5%

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development. * May not equal 100 due to rounding.

concentrated in an area. If an industry's share of total earnings is the same as the national share, it would have an LQ of 1.00. If it is less than the nation, it would have an LQ below 1.00, and above 1.00 if its LQ is higher than the nation.

While there was an increase in the number of enterprises related to this group between 2001 and 2012 (going from 98 to 134), the LQ for its employment went down, going from 0.64 in 2001 to 0.51 in 2012. This decline largely began with the recession, but the cluster continued to decline between 2010 and 2012, the last year for which data was available. Its LQ based upon wages also declined, going from 0.43 in 2001 to 0.36 in 2012. Both would appear to indicate a weakness in this particular trade area.

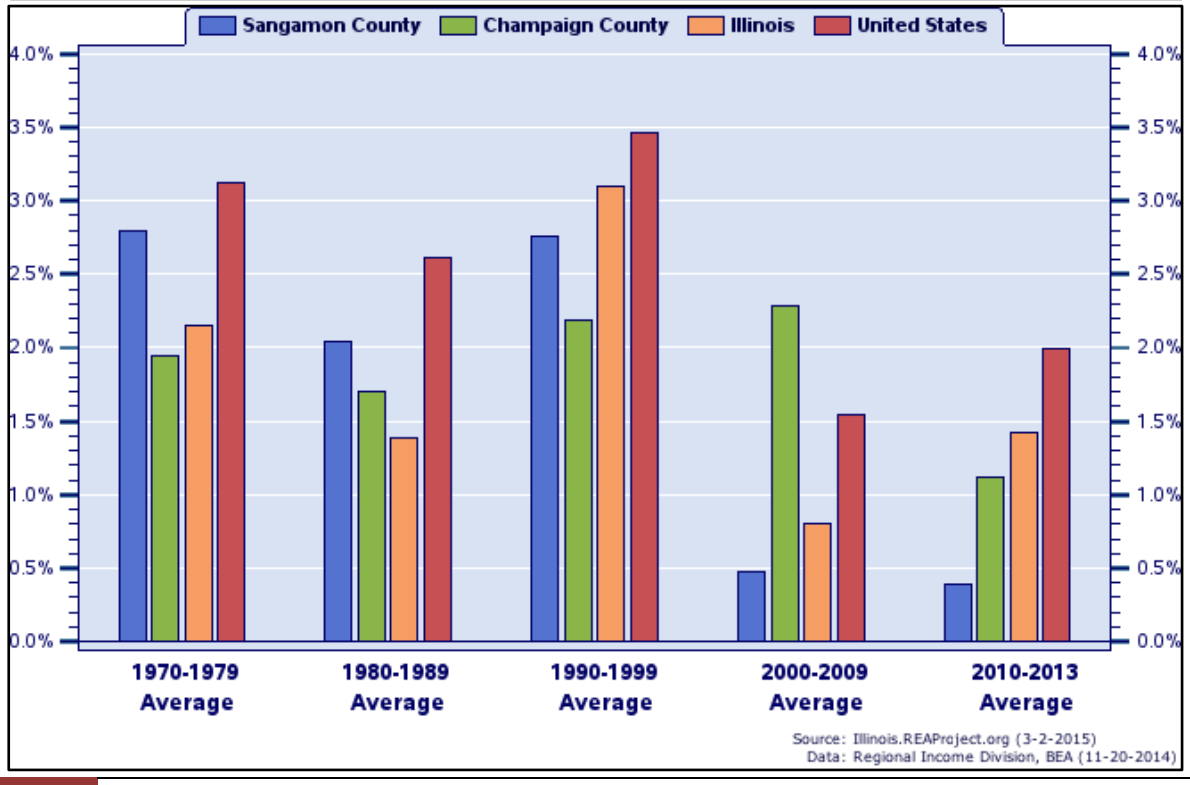
We have included additional tables providing LQ detail for all of the clusters at the end of this section for those wishing to review this data separately.

Comparison with Peer Counties

As with the other areas, we wished to compare aspects of industry growth in the Sangamon economic area with other peer counties. The SSCRPC chose real industry earnings over time for this comparison.

Figure 6.8 shows Sangamon and **Champaign County's** annual real total industry earnings growth rate from 1970 to 2013 by decade. IL-REAP reports that during this period, Sangamon County's real total industry earnings rose from $2,779 million in 1969 to $6,161 million in 2013, for a net gain of $3,328 million, or 121.7%. In comparison, Champaign County's real total

FIGURE 6.8: Decade Average Real Industry Earnings Growth Rates, Sangamon County Compared to Champaign County, State and Nation, 1970-2013 Source: IL-REAP



industry earnings increased from $2,586 million in 1969 to $5,914 in 2013, for a net advance of $3,328 million, or 128.7%. So while Sangamon County's real total industry earnings ranked 9th among the 102 counties in 2013 and Champaign ranked 10th, Champaign shows a much better rate of growth in more recent years.

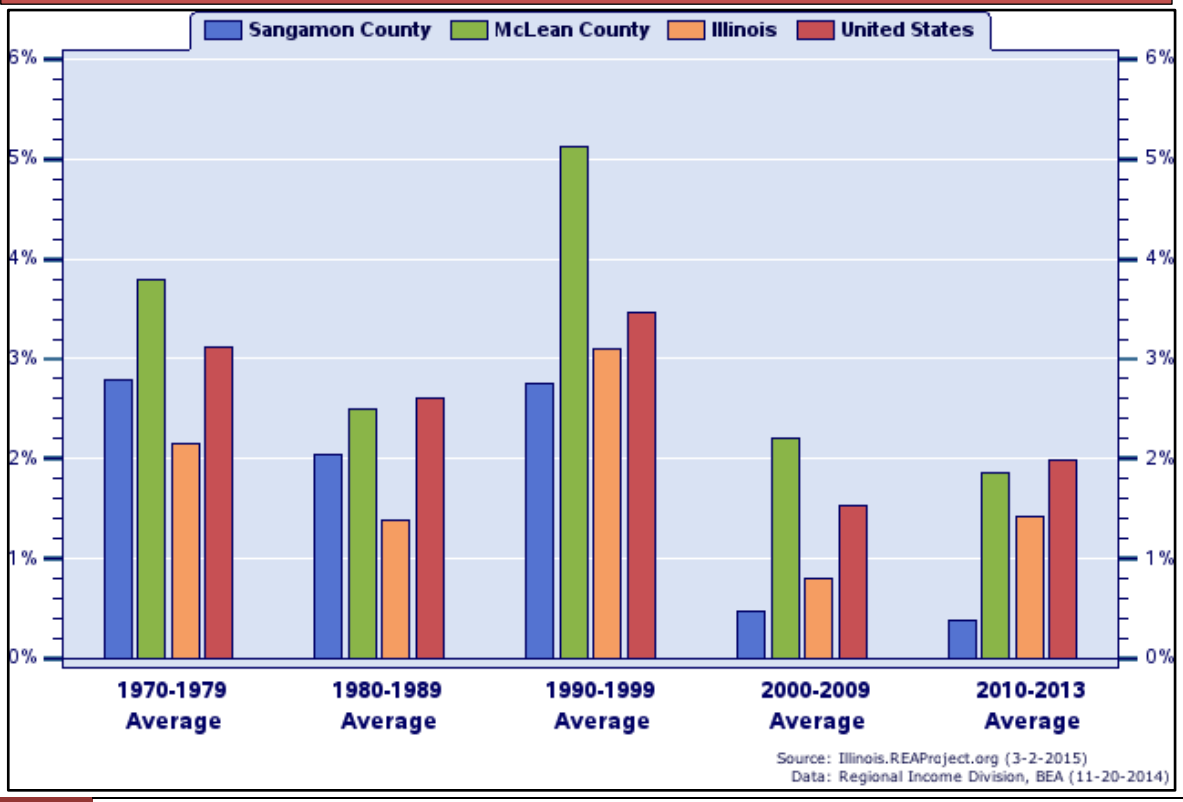
Figure 6.8, on the preceding page, shows this differential. Sangamon County's average real total industry earnings growth outpaced Champaign's average during the 1970s (2.79% vs. 1.94%), the 1980s (2.04% vs. 1.70%), and the 1990s (2.76% vs. 2.19). But Sangamon began to trail considerably in the 2000s (0.48% vs. 2.28%), and was below the Champaign average during the four-year period of this decade (0.39% vs. 1.43%).

Relative to Illinois' real total industry earnings growth trends, Sangamon outpaced Illinois during the 1970s (2.79% vs. 2.15%) and 1980s (2.04% vs. 1.39%), but began to lag in the 1990s (2.76% vs. 3.09%), continuing into the 2000s (0.48% vs. 0.81%). It fell well below the state over 2010-2013 (0.39% vs. 1.43%).

As the figure also shows, Sangamon fell below the national average during all of these periods, but fared better during the earlier decades.

Figure 6.9 shows a similar trend for **McLean County.** Again, while Sangamon County's real total industry earnings rose from $2,779 million in 1969 to $6,161 million in 2013, McLean County's real total income earnings rose from $1,586 million to $6,338 million, for a net advance of $4,752 million, or 299.6% compared to Sangamon's $3,382 million, or 121.7%. While Sangamon ranked 9th among Illinois counties in

FIGURE 6.9: Decade Average Real Industry Earnings Growth Rates, Sangamon County Compared to McLean County, State and Nation, 1970-2013 Source: IL-REAP



2013, McLean had moved to 8th.

Unlike in the case of Champaign, Sangamon County's average annual real total industry earnings growth lagged McLean's from the outset. It was below McLean's in the 1970s (2.79% vs. 3.79%), the 1980s (2.04% vs. 2.49%), the 1990s (2.76% vs. 5.13%), and the 2000s (0.48% vs. 2.21%). This trend continued into the current decade with the average from 2010-2013 being 0.39% for Sangamon and 1.85% for McLean.

The reader will also note that during the period studied, McLean's real total industry earnings out-performed the state's in every decade, and out-performed the nation's in all but one (1980-1989).

Figure 6.10 provides the same comparison for **Peoria County**. Sangamon performs somewhat better in this peer comparison in the early decades, but again falls behind in the more recent ones.

In comparison to Sangamon, Peoria County's real total industry earnings increased from $3,267 million in 1969 to $6,546 million in 2013, for a net increase of $3,279 million or 100.4%. During this same period, Sangamon's increased from $2,779 million to $6,161 million, for a 121.7% gain. But notice that unlike the situations with Champaign and McLean, Peoria County began with a larger total industry earnings base than Sangamon ($3,267M vs. $2,779M), meaning that it would have to make larger average gains than the others to yield a similar net percentage increase. Even with the growth differential noted above, by 2013 Peoria County's earnings still ranked 7th in the state while Sangamon's ranked 9th.

FIGURE 6.10: Decade Average Real Industry Earnings Growth Rates, Sangamon County Compared to Peoria County, State and Nation, 1970-2013 Source: IL-REAP

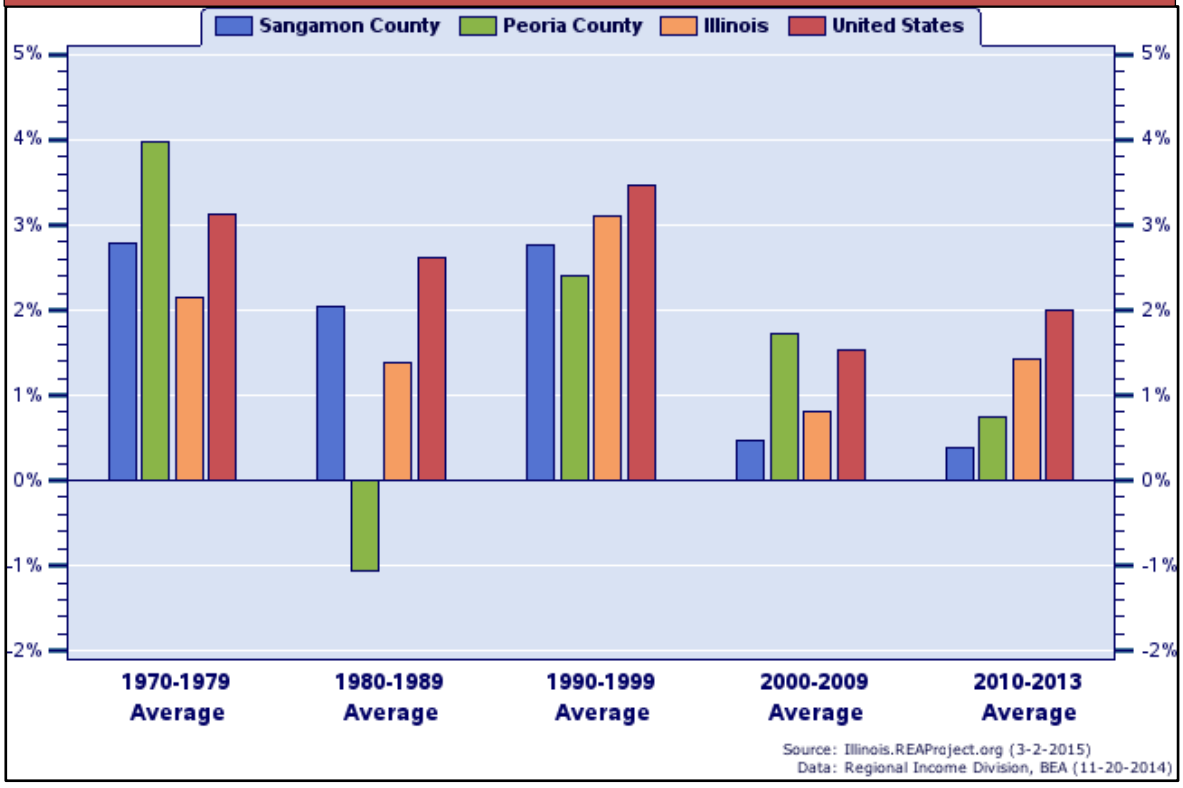


Figure 6.10 also shows how this played out over time, showing a trend for Sangamon similar to that we have seen in the other two comparisons.

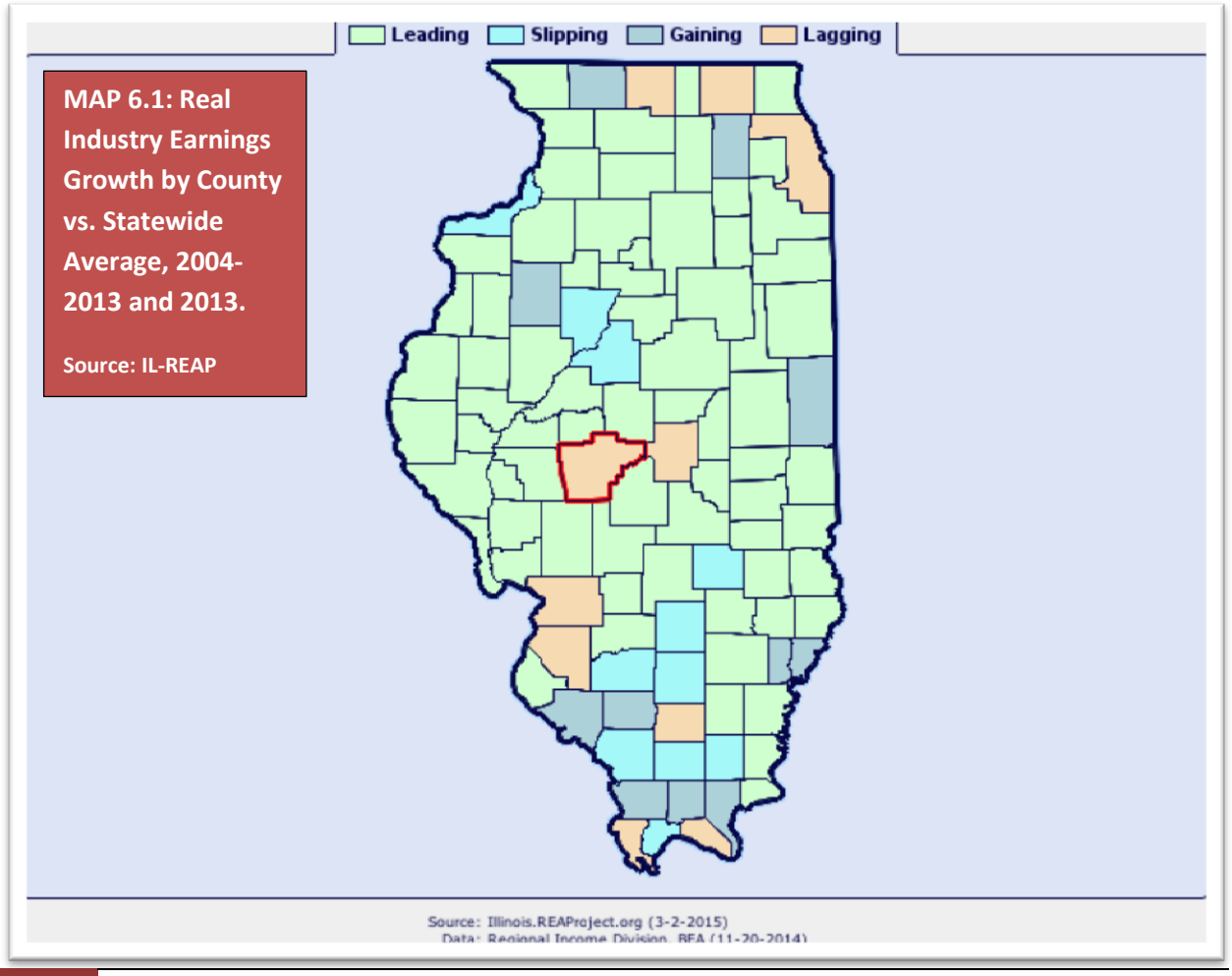
During the 1970s, Sangamon's average real industry earnings fell below Peoria County's (2.79% vs. 3.97%), however, it outpaced Peoria during the 1980s (2.04% vs. -1.06%) and slightly into the 1990s (2.76% vs. 2.41%). When considering comparisons between the three peer counties earlier in this report, we commented on the effect that the industrial downturn of the 1980s had on heavy manufacturing economies such as that found in Peoria. Figure 6.10 clearly demonstrates this effect.

Figure 6.10 shows improvement beginning in Peoria County in the 1990s, and by the 2000s Sangamon trailed Peoria (0.48% vs. 1.72%); a trend which continued into the first four years of this decade (0.39% vs. 0.74%).

In all peer county comparisons, while the Sangamon economic area fared well in the earlier decades, one sees a downward trend in more recent decades. For this reason one would expect that when LSGL analysis is applied, this condition would be identified in the results.

Long Term Industrial Growth Pattern and Current Status: "Lagging"

As with the other sections we conclude this one with IL-REAP's LSGL Analysis. **Map 6.1** shows



MAP 6.1: Real Industry Earnings Growth by County vs. Statewide Average, 2004-2013 and 2013.

Source: IL-REAP

that Sangamon is found to be classified as *Lagging*. This is because in 2013 Sangamon County's real total industry earnings growth rate of 0.01% trailed the statewide overall average of 0.78% over 2004-2013, and its 1.82% growth rate also trailed Illinois statewide average of 1.92% over 2013. Accordingly, IL-REAP classified Sangamon as among the 10 counties that were Lagging as its real total industry earnings growth was below the Illinois average in 2013 and its longer-term average also was below that of the 2004-2013 average.

Figure 6.11 again displays Illinois' 102 counties as dots on a scattergram, showing Sangamon's position (96th) vis-à-vis the other counties. As stated previously, the vertical axis on the scattergram represents the average annual real total industry earnings growth rate over the long-term period (2004-2013), while the horizontal axis represents the real total industry earnings growth rate for the near-term (2013). In all, 81 of the 102 counties surpassed the statewide average over 2004-2013, while 21 counties fell below. On this scatterplot, Sangamon County ranks 96th out of the 102.

This is in comparison to our three peer benchmark counties. Champaign (ranked 71st) as well as McLean (68th) are classified as Leading counties, being among the 70 counties whose average annual real total industry earnings growth rate surpassed both the short and long-term statewide rates. Peoria was identified among the 11 Slipping counties, as it long-term growth exceeded the statewide average but near-term growth fell below it.

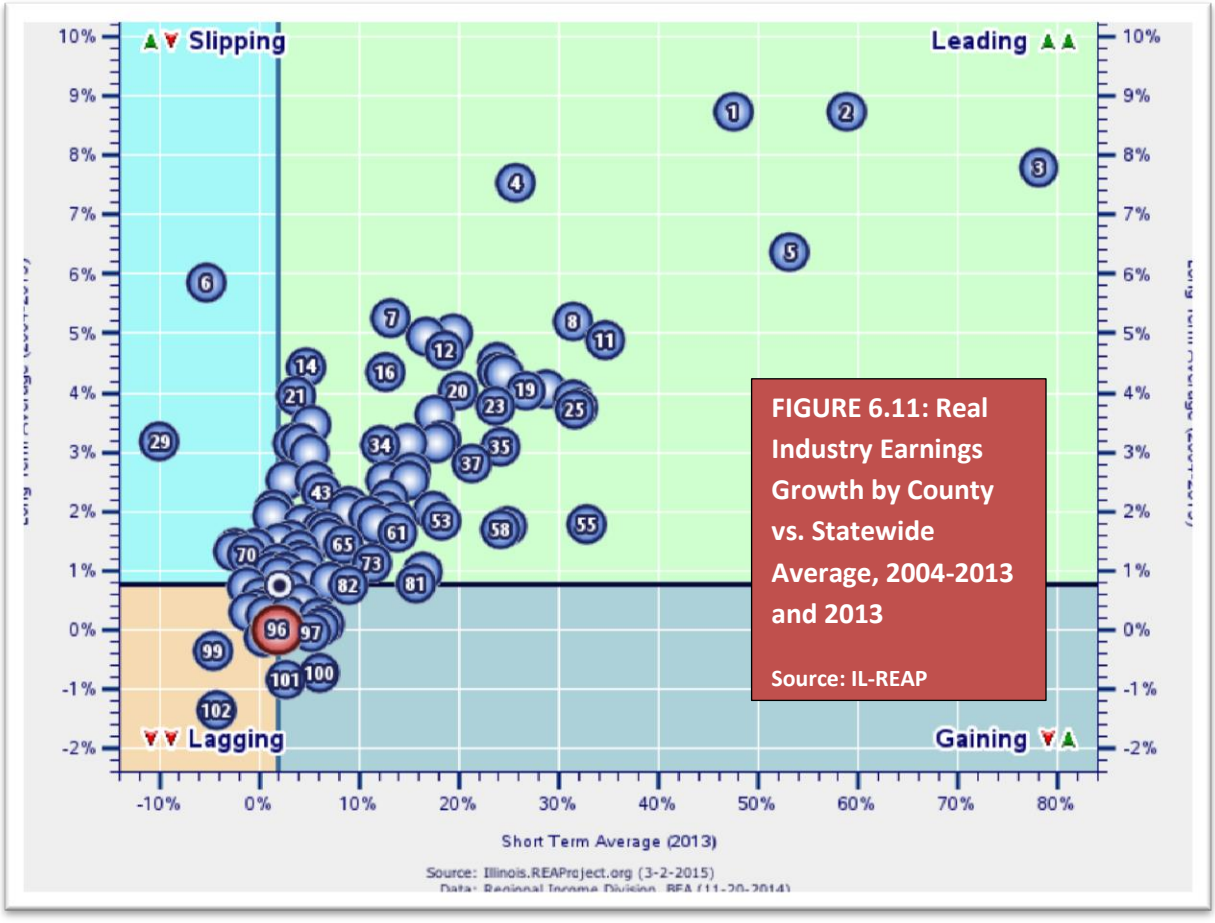


FIGURE 6.11: Real Industry Earnings Growth by County vs. Statewide Average, 2004-2013 and 2013

Source: IL-REAP

TABLE 6.12: Sangamon County Industry Clusters, Location Quotient, Establishments, 2001-2012

Cluster	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced Materials	0.15	0.27	0.27	0.61	0.65	0.63	0.55	0.55	0.48	0.46	0.47	0.44
Agribusiness, Food Processing & Technology	0.46	0.49	0.54	0.76	0.79	0.80	0.77	0.82	0.81	0.85	0.92	0.97
Apparel & Textiles	0.29	0.24	0.26	0.59	0.60	0.57	0.80	0.80	0.66	0.70	0.74	0.69
Arts, Entertainment, Recreation & Visitor Industries	0.63	0.61	0.67	0.89	0.90	0.92	0.93	0.94	0.94	0.91	0.90	0.87
Biomedical/Biotechnical (Life Sciences)	0.69	0.76	0.74	0.92	1.00	1.01	1.04	1.00	0.98	0.98	1.00	0.96
Business & Financial Services	0.90	0.93	1.04	1.14	1.12	1.11	1.09	1.09	1.05	1.05	1.05	1.04
Chemicals & Chemical Based Products	0.09	0.11	0.09	0.88	0.90	0.91	0.85	0.86	0.72	0.70	0.67	0.65
Defense & Security	0.62	0.63	0.86	1.07	1.05	1.02	1.00	1.00	0.96	0.93	0.90	0.85
Education & Knowledge Creation	0.51	0.67	0.69	1.18	1.22	1.22	1.13	1.10	1.06	1.05	0.99	1.08
Energy (Fossil & Renewable)	0.60	0.53	0.66	0.88	0.92	0.84	0.81	0.78	0.78	0.80	0.80	0.78
Forest & Wood Products	0.23	0.00	0.00	0.66	0.66	0.63	0.60	0.55	0.64	0.69	0.73	0.72
Glass & Ceramics	0.00	0.00	0.00	1.10	1.14	1.17	1.35	1.23	1.25	1.12	0.98	0.80
Information Technology & Telecommunications	0.64	0.64	0.91	1.21	1.15	1.13	1.08	1.03	0.98	0.98	0.95	0.86
Transportation & Logistics	0.67	0.67	0.72	0.91	0.89	0.97	0.94	0.95	1.03	1.04	0.95	0.93
Manufacturing Supercluster	0.00	0.00	0.00	0.37	0.38	0.43	0.42	0.44	0.46	0.48	0.44	0.44
■ Fabricated Metal Product Mfg.	0.00	0.00	0.00	0.25	0.22	0.23	0.23	0.31	0.29	0.32	0.35	0.38
■ Machinery Mfg.	0.00	0.00	0.00	0.41	0.48	0.49	0.45	0.51	0.63	0.58	0.42	0.43
■ Computer & Electronic Product Mfg.	0.00	0.00	0.00	0.66	0.76	0.96	0.99	0.73	0.82	0.72	0.80	0.70
■ Electrical Equipment, Appliance & Component Mfg.	0.00	0.00	0.00	0.89	0.69	0.93	0.94	0.94	0.93	1.16	0.73	0.73
■ Transportation Equipment Mfg.	0.00	0.00	0.00	0.32	0.33	0.33	0.33	0.34	0.34	0.35	0.32	0.32
Mining	0.00	0.00	0.00	0.62	0.61	0.60	0.58	0.58	0.57	0.43	0.43	0.42
Printing & Publishing	0.67	0.73	0.74	0.98	1.01	1.04	1.13	1.09	1.02	1.04	1.10	1.08

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development.
Shaded 2007-2009 indicates most recent recession period.
Primary Metal Mfg. LQ was not included in this data set for 2010 as it was not included for other years.

TABLE 6.13: Sangamon County Industry Clusters, Location Quotient, Employment, 2001-2012

Cluster	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced Materials	0.25	0.24	0.24	0.24	0.26	0.23	0.23	0.27	0.23	0.24	0.18	0.14
Agribusiness, Food Processing & Technology	0.34	0.34	0.30	0.28	0.29	0.30	0.33	0.32	0.37	0.38	0.31	0.35
Apparel & Textiles	0.18	0.18	0.25	0.25	0.28	0.29	0.29	0.26	0.28	0.29	0.45	0.41
Arts, Entertainment, Recreation & Visitor Industries	0.64	0.62	0.64	0.65	0.64	0.65	0.61	0.55	0.54	0.54	0.51	0.51
Biomedical/Biotechnical (Life Sciences)	1.01	0.98	0.94	0.98	0.96	0.97	0.98	1.00	0.94	0.94	0.92	0.93
Business & Financial Services	0.81	0.83	0.81	0.84	0.79	0.77	0.76	0.78	0.81	0.79	0.75	0.73
Chemicals & Chemical Based Products	0.16	0.24	0.26	0.27	0.23	0.25	0.24	0.24	0.22	0.21	0.23	0.21
Defense & Security	3.75	3.74	3.66	2.97	2.84	2.79	2.82	2.84	2.69	2.52	2.45	2.42
Education & Knowledge Creation	0.39	0.45	0.51	0.53	0.58	0.58	0.59	0.61	0.60	0.58	0.55	0.55
Energy (Fossil & Renewable)	0.51	0.48	0.49	0.57	0.59	0.58	0.62	0.62	0.65	0.60	0.56	0.56
Forest & Wood Products	0.16	0.22	0.22	0.26	0.23	0.22	0.22	0.23	0.23	0.25	0.33	0.35
Glass & Ceramics	0.13	0.14	0.16	0.19	0.18	0.16	0.15	0.19	0.18	0.19	0.16	0.14
Information Technology & Telecommunications	0.65	0.66	0.69	0.78	0.70	0.76	0.78	0.82	0.75	0.68	0.58	0.46
Transportation & Logistics	0.38	0.33	0.37	0.36	0.34	0.32	0.33	0.38	0.33	0.35	0.29	0.26
Manufacturing Supercluster	0.23	0.24	0.24	0.25	0.26	0.27	0.30	0.32	0.34	0.33	0.25	0.27
■ Fabricated Metal Product Mfg.	0.10	0.10	0.10	0.10	0.09	0.09	0.16	0.21	0.24	0.22	0.23	0.23
■ Machinery Mfg.	0.12	0.15	0.11	0.09	0.11	0.13	0.14	0.15	0.15	0.16	0.17	0.50
■ Computer & Electronic Product Mfg.	0.28	0.32	0.29	0.32	0.36	0.35	0.35	0.37	0.36	0.33	0.28	0.30
■ Electrical Equipment, Appliance & Component Mfg.	1.66	1.77	1.95	2.14	2.26	2.36	2.53	2.61	2.72	2.72	0.69	0.18
■ Transportation Equipment Mfg.	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.22	0.19
Mining	0.18	0.14	0.18	0.19	0.24	0.27	0.37	0.17	0.25	0.05	0.02	0.03
Printing & Publishing	0.48	0.50	0.51	0.56	0.58	0.58	0.50	0.47	0.49	0.48	0.48	0.45

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development.
Shaded 2007-2009 indicates most recent recession period.

TABLE 6.14: Sangamon County Industry Clusters, Location Quotient, Annual Wages, 2001-2012												
Cluster	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced Materials	0.23	0.20	0.19	0.20	0.22	0.20	0.20	0.23	0.20	0.20	0.17	0.14
Agribusiness, Food Processing & Technology	0.41	0.39	0.33	0.33	0.34	0.37	0.38	0.41	0.40	0.41	0.33	0.42
Apparel & Textiles	0.21	0.22	0.32	0.35	0.37	0.40	0.32	0.29	0.32	0.32	0.45	0.41
Arts, Entertainment, Recreation & Visitor Industries	0.43	0.37	0.41	0.54	0.51	0.52	0.49	0.44	0.40	0.33	0.30	0.36
Biomedical/Biotechnical (Life Sciences)	0.93	0.85	0.81	0.87	0.94	0.96	0.98	0.96	0.90	0.90	0.88	0.89
Business & Financial Services	0.71	0.75	0.62	0.66	0.62	0.60	0.57	0.58	0.62	0.59	0.60	0.60
Chemicals & Chemical Based Products	0.16	0.23	0.25	0.27	0.23	0.25	0.25	0.21	0.18	0.20	0.20	0.19
Defense & Security	3.31	3.25	3.19	2.70	2.55	2.57	2.60	2.60	2.45	2.30	2.20	2.14
Education & Knowledge Creation	0.36	0.41	0.46	0.53	0.57	0.59	0.59	0.59	0.56	0.54	0.50	0.51
Energy (Fossil & Renewable)	0.46	0.43	0.42	0.52	0.55	0.53	0.57	0.52	0.58	0.49	0.46	0.45
Forest & Wood Products	0.15	0.22	0.23	0.26	0.23	0.23	0.23	0.25	0.20	0.21	0.27	0.27
Glass & Ceramics	0.14	0.14	0.15	0.19	0.18	0.15	0.17	0.20	0.20	0.16	0.16	0.13
Information Technology & Telecommunications	0.52	0.54	0.51	0.60	0.57	0.52	0.58	0.60	0.55	0.51	0.44	0.35
Transportation & Logistics	0.36	0.31	0.34	0.34	0.34	0.30	0.30	0.36	0.30	0.32	0.27	0.25
Manufacturing Supercluster	0.20	0.21	0.21	0.23	0.25	0.26	0.28	0.30	0.31	0.31	0.27	0.33
■ **Fabricated Metal Product Mfg.**	0.11	0.11	0.10	0.11	0.10	0.10	0.18	0.22	0.24	0.24	0.25	0.25
■ **Machinery Mfg.**	0.12	0.13	0.15	0.12	0.17	0.21	0.22	0.21	0.22	0.23	0.31	0.93
■ **Computer & Electronic Product Mfg.**	0.20	0.24	0.21	0.23	0.28	0.27	0.25	0.28	0.27	0.23	0.21	0.22
■ **Electrical Equipment, Appliance & Component Mfg.**	1.71	1.77	1.89	2.18	2.32	2.40	2.55	2.72	2.80	2.80	0.72	0.19
■ **Transportation Equipment Mfg.**	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.25	0.22
Mining	0.24	0.16	0.22	0.24	0.27	0.29	0.36	0.18	0.26	0.05	0.02	0.03
Printing & Publishing	0.44	0.41	0.42	0.49	0.50	0.51	0.39	0.36	0.37	0.35	0.34	0.36

Source: Data from U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages; Cluster definition by Purdue Center for Regional Development.
Shaded 2007-2009 indicates most recent recession period.

7. Trends in High Technology Business Growth in the Economic Area

In Section 6 of this report, the degree to which the economic area was growing or declining was considered across a number of indicators for both traditional industry sectors and business clusters. As part of this analysis, special note was made regarding the apparent decline in some sectors and clusters (other than the Biomedical & Biotechnical one) that we believed to be particularly relevant to advancement of the economic area into what is becoming a more-and-more technology-based and driven economy.

For example, we found in one illustrative case (Information Technology & Telecommunications) that the cluster had declined in both its employment and annual wage Location Quotients (LQ). In 2001 this cluster had an LQ of 0.65 for employment, but this had fallen to 0.46 by 2012. For annual wages, the cluster showed an LQ of 0.52 in 2001, but it had fallen to 0.35 by 2012. Given that an LQ of 1.00 indicates the degree to which a cluster's employment and wages matched the national share, by 2012 both of the LQs in this sector had fallen below the national LQ over a 10-year period, even though its LQ for number of establishments had increased, going from 0.64 to 0.86 during this period. Overall this result showed strength in establishments but weakness in employment and wages.

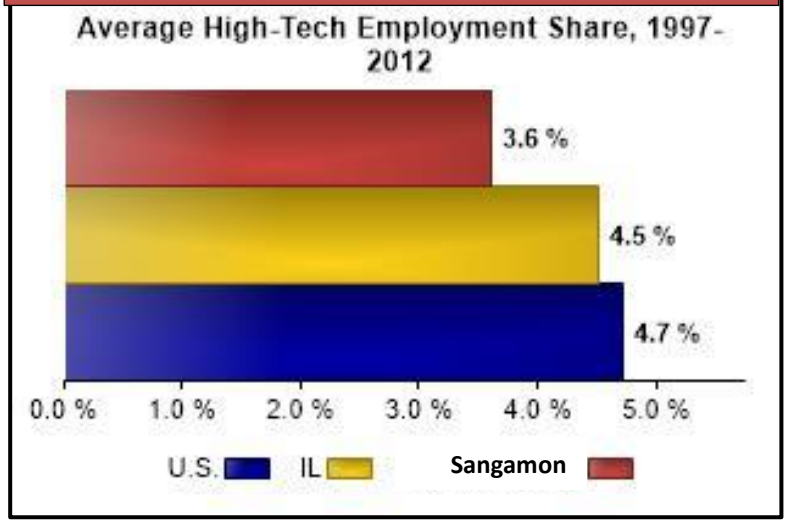
This decline is even better seen in terms of the real total wage decline in the cluster. In 2001, this cluster provided $248,188,339, or 4.7% of the total wages in the Springfield-Sangamon economic area, but by 2012 this had fallen by $77,404,630, or over 31%.

We believe that this trend is important, in that by 2012 the area had less than half the wage earnings in this cluster than those employed at the national level.

This finding, and the fact that the area had a low score on the U.S. Economic Development Administration's (USEDA) Innovation Index (see p. 13), led us to look further in to the share of "high-tech" businesses in the area, based upon the important role that we believe this group of businesses will have in the future.

Fortunately the Indiana Business Research Center (IBRC) at Indiana University's School of Business is funded by the USEDA to assess a number of aspects of regional economic innovation, including high -

FIGURE 7.1 Source: IBRC



tech employment share. The SSCRPC found this to be a useful measure in assessing the local economic area's overall presence in the modern, technology-driven economy.

High-Tech Employment Share

Figure 7.1 , on the preceding page, shows the average high-tech employment share (businesses involving highly skilled and specialized workforces) over the 1997-2012 period for the Springfield-Sangamon economic area. High-tech employment is derived from an NAICS-based definition provided by Moody's Analytics that measures an aggregation of employment in such key sectors as telecommunications, internet providers, and scientific laboratories. *As the figure shows, the local economic area lagged behind noticeably during this period.*

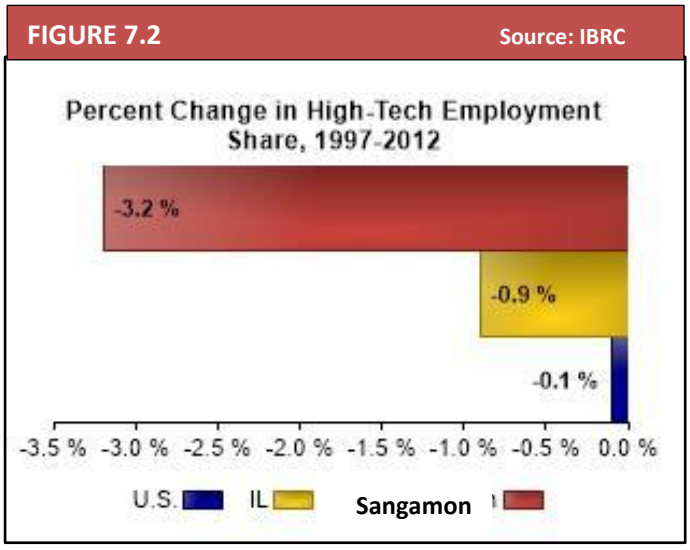
TABLE 7.1: Average High-Tech Employment Share, 1997-2012 Source: IBRC

	Average High-Tech Employment Share, 1997-2012	Average High-Tech Employment Share, 1997-2002	Average High-Tech Employment Share, 2006-2012
Illinois	4.5%	4.8%	4.2%
U.S.	4.7%	5%	4.6%
Champaign	2.9%	2.4%	3.4%
McLean	3.2%	2.1%	4%
Peoria	2.3%	1.9%	2.5%
Sangamon	3.6%	3.9%	3.3%

Table 7.1, above, provides a more revealing view. It compares high-tech employment share for Illinois and the nation with the Sangamon economic area and its three peer counties over the entire 1997-2012 period, and then compares the 1997-2002 period with the more recent 2006-2012 one. In this comparison, Sangamon performs well compared to the other three areas over the 1997-2012 period, but less favorably in the more recent one. While Sangamon shows a higher average than the other three in the early period, two counties (Champaign and McLean) have moved ahead of it in more recent years. More importantly, while the U.S., Illinois and Sangamon all showed declines in high-tech employment share during the 2006-2012 period – which was affected by the recent recession – the other three counties show noticeable gains.

This is confirmed in another way, as the IBRC also considered the average annual rate of change in the share of high-tech employment in the Sangamon economic area. **Figure 7.2** shows this as a bar chart that compares the local, state and national rates of change in high-tech employment during 1997-2012. One will note that while both the state and nation saw a negative percent change, they were much less than the one found in the Sangamon economic area by a considerable amount. It is difficult, therefore, to suggest that the loss in this area was largely due to state or national trends.

FIGURE 7.2 Source: IBRC



As one might guess based upon the results shown in Table 7.1, as **Table 7.2**, below, shows, none of Sangamon's benchmark peer counties demonstrating a negative percentage of change in high-tech business employment share over the period studied. In fact, their positive percentage of improvement was in the same range as Sangamon's rate of decline: 3% or better. Again, this is particularly notable given the declines shown at the state and national levels.

Table 7.2: Percent Change in High-Tech Employment Share, 1997-2012
Source: IBRC

	Rate of Change in High-Tech Employment Share, 1997-2012	High-Tech Employment Share, 1997	High-Tech Employment Share, 2012
Illinois	-0.9%	4.9%	4.3%
U.S.	-0.1%	4.8%	4.7%
Champaign	3%	2.2%	3.5%
McLean	3.7%	2.3%	4%
Peoria	3.5%	1.6%	2.8%
Sangamon	-3.2%	4%	2.5%

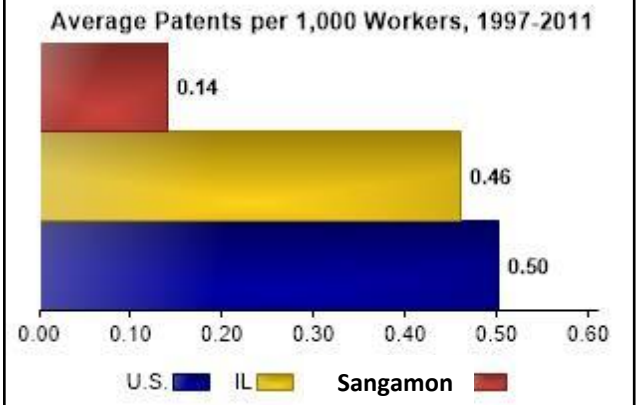
Because of this differential, the SSCRPC looked to two factors that are seen as serving as inputs to high-tech business growth.

Patents

IBRC finds that new patented technologies provide an indicator of individuals' and firms' abilities to develop new technologies and remain competitive. **Figure 7.3** provides a comparison of patents per 1,000 workers in the local economic area to the state and nation. Again one finds that Sangamon lags behind both the state and the nation in patents.

However, given the industry mix in the area and the fact that there is no local university presently offering advanced degrees in the hard sciences, that should not come as a complete surprise. One might expect that patentable

FIGURE 7.3 Source: IBRC



technologies could arise from entrepreneurial efforts and the biomedical/biotechnical cluster, however.

What may be more instructive as to whether or not this creates a significant weakness would be how Sangamon's peer benchmark counties score on the same measure, particularly given the positive changes they have seen in high-tech employment growth over the past several years and the fact that all are home to universities offering advanced degrees in the sciences. **Table 7.3** provides this comparison

Table 7.3: Average Patents per 1,000 Workers, 1997-2011
Source: IBRC

	Average Patents per 1,000 Workers	Index Differential from Sangamon
Illinois	0.46	3.29
U.S.	0.50	3.57
Champaign	0.61	4.36
McLean	0.18	1.28
Peoria	0.74	5.29
Sangamon	0.14	1.00

along with an indexed difference.
As this table indicates, all of the jurisdictions listed generate more patents per 1,000 workers than Sangamon and, other than for McLean County, to a much greater extent.

Technology-Based Occupations

One final way to consider the economic area's high-technology business growth positon is by considering the employment share held by technology-based knowledge occupations. IBRC considers six occupational clusters (Information Technology; Engineering; Health Care and Medical Science Practitioners and Scientists; Mathematics, Statistics, Data and Accounting; Natural Science and Environmental Management; and Postsecondary Education and Knowledge Creation) to be closely associated with the production of innovations. For this reason, we believe they are also fundamental to an area's long-term success in developing and courting technology-based industry.

Since the Springfield-Sangamon economic area has strengths in the Biomedical/Biotech area and does host postsecondary institutions offering graduate study in several of the other knowledge areas, one might expect the region to perform better with this indicator, and so it does. **Figure 7.4** provides an IBRC bar chart showing how the area compared with the state and nation in 2011: nearly the same percentage for each.

TABLE 7.4: Technology-Based Knowledge Occupations Share of Total Employment, 2011 Source: IBRC

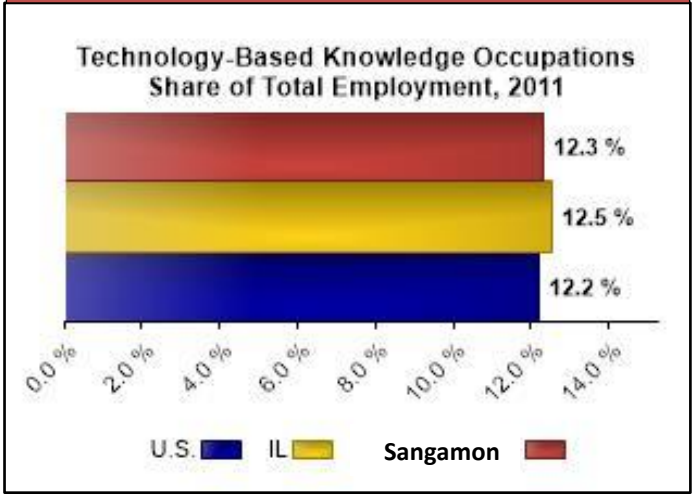
	Technology-based Knowledge Occupation Cluster Share of Total Employment, 2011
Illinois	12.5%
U.S.	12.2%
Champaign	10.9%
McLean	11.4%
Peoria	12.0%
Sangamon	12.3%

It also performs better in this area than do our regional peers, as shown in **Table 7.4**. What is particularly surprising in this data are the results from Champaign and McLean, both of which support large, four-year advanced degree granting institutions. This may be an indication that while such institutions may have an effect on other areas of the high-technology business group, such as patents, they appear to have less on the occupation clusters in the areas in which they are located.

All-in-all, one finds that the technology-based occupations appear to exist in the area to support high-technology business growth, but such growth has not kept up with the state, nation or peer communities.

The SSCRPC suspects that other factors – such as availability of venture capital – may be a causal factor in its lagging. This is an area that demands additional research and analysis as economic development plans are made and strategies developed.

FIGURE 7.4 Source: IBRC



Conclusions

As mentioned in the introduction to this report, the SSCRPC conducted this research in order to provide those involved in economic development with a better understanding of the forces that have been acting on the regional economy over a longer time period than is usually considered in most studies of this type. Gaining a better understanding of the long-term forces working to constrain or advance the area's economy is important because an economic development plan, like any other good plan, must tell a story about the past and present, as well as the one about some desired future.

The Relevance of Forces and Trends over Time to Future Success

Considering the past is important because the fundamental forces that have shaped it are likely to still exist, forming trends that affect our future as well as our present. An understanding of these forces and trends is critical to the formulation of local economic development strategy, as the strategies selected should encourage and build upon the positive forces while minimizing or eliminating the negative ones. As the SSCRPC was unable to find any previous work that looked out over the longer term to identify the fundamental forces and trends shaping the economy of the region, it was our hope that this report would help fill the void.

In the end we found that looking at long-term trends was important because they are often overshadowed by local economic development planning and policy discussions that tend to focus solely on such matters as municipal regulations, tax rates, and place marketing. While all of these matters are important to economic development, we found that many of the forces acting to constrain growth in the economic area had little to do with them. The forces often crossed decades, bridging the terms of local elected officials, acting regardless of the regulations in place at the time, flavored by demographic conditions, and many times had more to do with state actions and conditions in the national marketplace than local policies or practices.

Moreover, absent a better understanding of where we are – and how we got here economically – leaves us with little insight into which changes in the business climate *might* yield the most positive results: building upon our strengths and mitigating weaknesses.

So what did we find?

Given the sets of data provided in the pages above, which is only a portion of the data analyzed, we are sure that others will draw different findings and conclusions from it than we, broadening the conversation. However, we believe that several major conclusions can be drawn from the data as well as several supporting findings that we believe help validate them.

The Economic Area is Unique….Providing Stability, but Bringing with it Some Weakness

First, we began this report by noting the conditions unique to the economic area as well as some of its inherent strengths, including potential target areas for development. Clearly

one of these strengths is the long-term economic stability of the area's economy, which we believe is largely due to its being relatively self-contained as well as the effect that state government employment has had as a moderating force in the past.

Historically the region has not seen the economic lows that other parts of the state have seen, particularly those more dependent on heavy manufacturing. At the same time, it has not seen the highs that often come to areas with a more diverse industry mix or that have stronger inter-business linkages across a broader market area; particularly areas that have industries that produce products rather than services. ***But this stability may have provided a false sense of security that has cloaked changes in the economic area over time, making us unaware of some of the real challenges we face.***

In reviewing some of the trends described in various sections of this report, we were reminded of the story of the frog that when tossed into a pot of boiling water jumps out, but when put in a pan of cool water that is brought to a boil, does not know that he is being cooked! The economic changes that occurred between the 1970s and more recent years were largely gradual, but had a real effect on population growth, wealth creation, job growth, and business growth. Some of these changes were and are known, but seem to have stimulated little call for planned action as they occurred.

For example, one of the factors that helped provide stability to the Sangamon economic area over the past 40 years is the presence of state government and the employment it brought. This employment did not just shift wealth from the rest of the state to those directly employed by it, but rolled though the regional economy as state employees bought goods and services here. It also brought to the area private and not-for-profit employers that served the state and its agencies. They, along with State government, employed local residents who bought goods and services in the local marketplace, and made organizational purchases in the area as well.

However, over the second half of the period studied the Sangamon economic area experienced a significant decline in the State's workforce, which had a noticeable effect on the region's economic growth.

As our review describes, one estimate indicates that as many 5,900 state government jobs have been shed in this metro area since 1990 (see page 16), while another reports a loss of almost 5,500 since 2004 (see page 50). Those who live in the region should not be surprised by this finding, but they may not understand its implications unless it is put in some context.

For example, Chrysler's Belvidere, IL, auto assembly plant employed 2,650 workers during the 2007 model year.[53] The Volkswagen plant in Chattanooga, TN, employs 3,200.[54] So, the loss of state government jobs reported in the economic area during the period studied is somewhat comparable to the loss of two automotive plants. The major difference being that this loss of state jobs – unlike the closing of an auto plant – has occurred gradually over time, so is less noticeable.

Because of this, it occurred absent any concrete symbols of the loss other than some empty office buildings, many in the Springfield city center. If two automotive plants had existed in Sangamon County, and then been closed and

shuttered in 2004, there would have likely been a significant public concern yielding a call for action. But the fact that these state government jobs were shed piecemeal and over time without leaving acres of industrial property sitting idle behind chain-link fences, did not seem to generate the same level of attention.

And as previously suggested, this loss is not limited to the state jobs shed themselves. The workforce reduction – and reduced state spending in the region in general – rolled through the larger economy, generating additional economic loss in other sectors. We believe that this in part helps explain the projected decline in the civilian employed workforce in the Sangamon economic area between 2010 and 2014 of as many as 4,600 workers.

As there is little evidence to indicate that government employment at any level will expand to past levels anytime in the near future, the need to expand wealth and job creation in other parts of the local economy becomes clear.

The Economic Strength of the Area has Eroded…Particularly in Comparison to Peers

But to what extent have other sectors grown to replace this decline in state employment? This leads to our second major conclusion, which is intertwined with our first: ***the economic strength of the region has eroded noticeably over time, lagging behind similar central Illinois economic areas.***

This finding is critically important to our economic development planning. While it is of great benefit to live, work and own a business in an area of economic stability, one person's stability is another's stagnation. Absent robust growth the area is less able to return dislocated workers to employment, produce new opportunities for those entering the workforce for the first time, provide rising real incomes for those in the workforce, or encourage the in-migration of new, younger workers, particularly those with the job skills and technical training that the modern economy requires.

As we point out in Section 6 of this report, when real total industry earnings are reviewed, it appears that the economic area has gone through noticeable phases since the 1970's. The first in the late 70s to mid-80s as the national economy saw a loss of manufacturing that tumbled through the U.S. economy, leading to losses in this region as well.

While this area currently has more manufacturing – at least light manufacturing – than the public might think (111 manufacturing establishments within the County in 2012, but down from 132 in 1998), they have not replaced the manufacturers lost during this earlier period in numbers or employees. Only 3,569 workers were employed by manufacturers in 2004 (2.8% of the workforce), a number that had declined by almost 380 by 2013.

Even so, the local economy rebounded during the mid-80s, we believe largely due to increased government spending during this period, which helped job growth in the area. This was further advanced by growth in some service industry sectors (e.g., Finance & Insurance; Real Estate & Rental & Leasing).

But beginning in the 90s, these improvements became static. So much so, that by the 2000s

the area was falling behind national, state *and* central Illinois peer county rates of growth.

Clearly the Great Recession had an effect on the local economy, and we see some continuation of that even today. But we found reductions and stagnation occurring in several core industry sectors prior to that time. Other counties were similarly affected by this recession, but based upon the most recent data, they appear to be weathering the storm better than Sangamon.

While unemployment rates during and since the recession have been very positive for the local economic area, what they do not describe is whether or not dislocated workers were able to find re-employment similar to what they had prior to the downturn, the reductions in the real value of wages and benefits for jobs that were not shed, or the ease with which new workers are able to enter the workforce. In looking at population growth numbers (which will be addressed again, below), one might come to the conclusion that unemployment numbers may have been somewhat moderated by decreases in the rate at which people *were* available to enter the area's workforce, as the Boomers retired and in-migration slowed.

Clearly the reduction in state government employment was a force that led to the region's sluggish growth in combination with its relatively self-contained economy. However, we believe that this sluggish growth was also due to the local economic area's less diverse mix of industries – which was identified in the SSCRPC's earlier study[55] -- few of which are hard-product producing. Our largest industry clusters are largely service-oriented, for example.

It is not surprising then that when IL-REAP's LSGL analysis is applied to the economic area, looking at both past and near-term performance in comparison to the state as a whole and the other 101 counties, Sangamon County was found to be "Slipping", in terms of population and job growth (which are somewhat inter-related), and "Lagging" in terms of business growth. Only in the growth of personal wealth does the region perform better, being classified as "Gaining", although this gain was weak and limited.

In none of these four fundamental areas was this region identified as "Leading", meaning that the rates of the area's growth had exceeded the state-wide average over* both *the short and long-term. This is in comparison to our three benchmark areas – Champaign, McLean and Peoria counties – which tended to perform better in these measurements.

If those involved in economic development for the region wished to establish measures to assess the success of their efforts over time, advancing the region in the four fundamental areas subject to the LSGL analysis provided in this report would be a logical starting point.

Fitting into the New Economy….Strengths *and* Weaknesses

This study did find several positive results.

First, the area has continued to show fundamental economic stability throughout the period. It is not unimportant to those who work and live here that when compared with much of the state, the area weathered the recent recession relatively well, even showing an up-

tick in the most recent economic data available and reported in this study. As mentioned previously, throughout the recession the Sangamon area's unemployment rate remained much better than did the state as a whole.

The patterns related to Nonfarm Proprietors vis-à-vis Wage and Salary jobs, discussed in Section 5 of this report, may also be taken as an indicator of the potential growth of a larger "entrepreneurial class", although additional work needs to be done concerning the causal factors as well as how this growth might be additionally stimulated. This is not inconsequential as it can lead to additional new small business growth as well as the expansion of existing small businesses.

It is also important that several of the industry sectors and clusters reported here showed noticeable growth, even if the growth of the private sector as a whole was more leisurely. Over the entire 2002-2013 period, businesses such as those in the Farm, Retail Trade, Information, Management of Companies & Enterprises, Educational Services, Arts Entertainment & Recreation, and Accommodation & Food Services sectors performed better than the national average, *yet only one of them (Farm) showed such growth by 2013*.

One sector (Health Care & Social Assistance) and its associated industry cluster (Biomedical/Biotechnology) showed particular strength throughout the period studied. This growth is particularly notable, not just because of these results but because of how this business group is expected to perform into the future as the population ages.

There are weaknesses, however, in some traditional segments of the economy. While we could not separate tourism out of the data as a stand-alone industry sector, sectors that can serve as surrogates for it did not show the magnitude of growth one would expect. Both the Arts, Entertainment & Recreation, and the Accommodation & Food Services sectors grew noticeably in number of establishments from 1998 to 2012, *but showed negative real average earnings per job growth in 2013, lagging behind the national growth rate in both.* This may be due to job reductions in these sectors. For example, when tourism and visitor travel is viewed through the lens of being a part of the Arts, Entertainment, Recreation and Visitor Travel cluster (one of the area's top five clusters based upon employment), *we found a decline of 1,140 jobs between 2001 and 2012, an almost 31% decline.* This decline may be due to the lingering effects of the recession, but is notable even so, and requires additional analysis.

Equally noticeable is the decline in some sectors and clusters (outside of Biomedical/Biotechnical one, as previously noted) relevant to advancement in the more technological, modern economy. This was addressed in Section 7, so will not be expanded upon here.

What we found important was that the local economic area appears to be performing comparatively well in terms of its ability to hold technology-based knowledge workers. This has wider implications beyond the ability to hold, grow and entice high-technology businesses.

Firms that require highly-skilled and specialized workers contribute to innovation in an economic area, as these workers provide a resource for other firms and even for other workers. ***As the economic area scored rather low on the Innovation Index, this is an important finding and one that needs to be***

taken into account in both future economic development planning as well as place marketing.

Population Growth….an Economic Cause and Consequence

In Section 3 of this report we gave particular attention to the role played by population growth in long term economic success, quoting REAP's contention that:

> Attracting and retaining people to live, work, raise a family, and retire underlies the economic vitality of any region. Population growth is both a cause – and a consequence – of economic growth (p. 25).

Population growth is both a cause and a consequence of economic growth because the two are so inter-twined.

A growing population increases the market-base of an area and provides potential workers for businesses interested in remaining, expanding and relocating there. Equally, when an area is economically stagnant or declining, people are more reticent to stay or move there due to the anticipated difficulty in finding work. This is particularly true for younger skilled as well as older experienced workers, particularly those with the education and skills most in demand in the modern economy, because they have options as to where to reside that others available to the workforce may not.

On this basis we found reasons to be concerned about the status of the Sangamon economic area. As we noted, the population in this economic area increased at slighter rates in the last three decades than it did in the prior two, suggesting that the area's rate of population growth is trending downward. While the area is expected to grow overall, it will not grow as quickly as it did in the past or as rapidly as some of our competing peer areas are growing. *In fact, and if present trends continue, the area may see a decline in growth rate of almost two-thirds between the 2000 census and 2015.* While the area still supports a significant population level which *is* growing, the growth is slowing. As the native population ages, concurrent with lower birth rates and a somewhat sluggish in-migration caused by a lagging job market, it is likely to fall behind economically.

And the problem will likely be exacerbated for two reasons. First, we found a decline in the number of those in the 19 and younger group: a vitally important segment of the local population as this cohort will ultimately move into the workforce in future years.

Additionally we found that the ratio of those in the younger and older age groups, those most likely to need support and governmental services, is increasing at a rate faster than those in the workforce age group, which will need to expand and prosper in order to provide the financial resources necessary to support this dependent population.

It is not surprising then that LSGL analysis classified the population pattern for the area as "Slipping", in that while Sangamon's population growth rate exceeded the statewide average over the longer-term, it was not doing so on the near term.

As economic development planning is done, the enticement of young, skilled people to stay and move to this area may become just as important to place marketing as seeking new businesses.

Advancing Economic Development Planning in the Area

As was mentioned in the introduction to this report, it was not our intent to provide a plan for the economic area, but to fill a void in our knowledge of the region so that effective economic development planning might occur. This, we believe, is critical to moving such planning ahead, as effective planning typically begins with two sets of analysis: one to identify the strengths, weaknesses, opportunities and threats an enterprise or region faces, what is often called a *SWOT* analysis; and one to identify the political, economic, social and technological trends that are affecting it in the present and foreseeable future, what is known as a *PEST* analysis.

This study provides data and some insights for both sets of analysis. Even though it presents only a broad-brush review of the forces and trends affecting the region, we believe it provides useful guidance that those responsible for local economic development can put to use as strategy is contemplated.

The area *does* show strengths. For example, it is relatively stable, has several locational foci that may serve as targets for development, includes sectors and clusters that have shown growth (particularly in the areas of medicine and biotechnology) and may be well-positioned for future growth, includes a strength in the technology-based knowledge occupations, and even with reductions in public employment, State employment remains a significant force. It also shows potential for growth among Nonfarm small enterprises, which can yield positive results for small business growth in the years to come.

It also shows weaknesses, largely demonstrated by lagging economic growth over the past few decades, which we believe is the result of declines in state government employment, the limited diversity of its industry sectors and clusters, declines in the expansion of the technology-based businesses that most often leads to innovative entrepreneurship, and all inter-twined with slowing population growth.

Opportunities can arise from these factors, as in the case of sole entrepreneurship growth, expansion of the region as a center for medical technology as well as medical services, and a re-capture of technology-based companies based upon those in the local workforce who have the knowledge and the skills these firms need and desire.

Even some of the negative trends identified can be addressed. Declines in the population, particularly in the pre-workforce cohort, could be addressed through in-migration, if the area were to offer both that jobs and local amenities that skilled younger workers seek when they make an employment location decision.

We find that the biggest threat that the area may face is due to its stability, and an acceptance that what has been is what will be in the future: the frog placed in a pot of cool water that is only slowly brought to a boil.

As we noted previously in this report, economic development is not something that any entity or locality does, but is an outcome of their strategies and efforts in support of both business and community development, *multiplied by local leadership*. This final item may be the compelling factor in the area's long-term success, building upon its strengths while acting to eliminate or mitigate its weaknesses.

Tables, Maps and Figures

Tables

Maps

Figures

Endnotes

[1] Uden, A. (2014). *How Resilient is Our Regional Economy?: A Peer Comparison of the Springfield Metropolitan Area's Resilience Capacity*. Springfield-Sangamon County Regional Planning Commission; Springfield, IL.
[2] Market Street Services, Inc. (Jan. 2011). *Target Cluster Analysis Greater Springfield, Illinois*. Market Street Services: Atlanta, GA.
[3] The Pathfinders (Sept. 2014). *The Springfield, Illinois, Area Labor Availability Report.* The Pathfinders: Dallas, TX.
[4] https://illinois.reaproject.org/.
[5] The REAP websites have been developed, operated, and are maintained by the Pacific Northwest Regional Economic Analysis Project (PNREAP) located in Washington State. PNREAP is a not-for-profit 501(c)(3) corporation organized explicitly to foster and further sound regional economic research, analysis, education, outreach and decision-making.
[6] Sims, N. (July 2012). Thinking about economic development planning, programming and assessment: Considering economic development as a component of comprehensive planning, *Planning Matters*. Springfield-Sangamon County Regional Planning Commission: Springfield, IL.
[7] Bureau of Labor Statistics (March 2013). *Labor Market Areas: 2013*. U.S. Department of Labor: http://bls.gov/lau/lmadir.pdf. P. iii.
[8] Bureau of Labor Statistics (Jan. 2014). *Labor Market Areas: 2014.* U.S. Department of Labor: http://bls.gov/lau/lmadir.pdf. P. 29.
[9] Bureau of Labor Statistics (March 2013). *Labor Market Areas: 2013*, Appendix II, Criteria for Designating Small Labor Market Areas. U.S. Department of Labor: http://bls.gov/lau/lmadir.pdf. P. 168.
[10] Tolbert, C.M., and Sizer, M. (1990). *U.S. Commuting Zones and Labor Market Areas: A 1990 Update*. Economic Research Service, Rural Economy Division, U.S. Department of Agriculture: Washington, D.C.
[11] ESRI forecasts for 2014 and 2019.
[12] 2010 data by the U.S. Bureau of the Census; 2014 is from ESRI estimate based on American Community Survey.
[13] Uden, A. (2014). *2010 Census Analysis: Springfield & Sangamon County, Illinois*. SSCRPC: Springfield, IL.
[14] Corporation for Enterprise Development (1993). *The Regional Performance Benchmark System*. CfED: Washington, DC.
[15] This analysis was conducted as part of that agency's Competitive Communities initiative.
[16] Commerce and Industry Taskforce, Springfield Strategy 2020 (June, 2002). *Commerce and Industry Strategy Group Final Report.* City of Springfield: Springfield, IL.
[17] Market Street Services, Inc. (2011). *Target Cluster Analysis, Greater Springfield Illinois*. Conducted for the Quantum Growth Partnership, Greater Springfield Chamber of Commerce. Market Street Services: Atlanta, GA.
[18] See www.statsamerica.org for additional information on this cluster analysis.
[19] Uden, A. (2014). *How Resilient if Our Regional Economy?: A Peer Comparison of the Springfield Metropolitan Area's Resilience Capacity*. SSCRPC: Springfield, IL.
[20] For example, see: PNC Financial Services Group (Aug. 2014). *Central Illinois Market Outlook.* PNC: Pittsburg, PA.
[21] See http://www.statsamerica.org/innovation/index_map/Innovation. Index developed for USEDA by the Purdue Center for Regional Development and the Indiana Business Research Center at Indiana University's Kelly School of Business.
[22] ESRI 2014 estimate based upon U.S. Bureau of the Census 2008-1012 American Community Survey data.
[23] Bureau of Labor Statistics (Jan. 2014). *Labor Market Areas: 2014.* U.S. Department of Labor: http://bls.gov/lau/lmadir.pdf. P. 29.
[24] SSCRPC (2014). *Local Market Analysis of Springfield Collar Communities: Sangamon County Smart Cities Project*. SSCRPC: Springfield, IL.
[25] Illinois Department of Employment Security. *Commuting Patterns, County-to-County Worker Flows*: www.idea.illinois.gov.
[26] Data provided to the Greater Springfield Chamber of Commerce by the Economic Information and Analysis Division, Illinois Dept. of Employment Security. State employment figures annual estimate.
[27] Hanson Professional Services, Inc. (2010) *Springfield-Sangamon County MPA Economic Corridor and Freight Study*. Conducted for the Springfield-Sangamon County Regional Planning Commission: Springfield, IL.

[28] U.S. Bureau of the Census, 2008-2012 American Community Survey estimate.
[29] U.S. Bureau of the Census, Census 2010 Summary File 1, ESRI Community Analyst.
[30] Hanson Professional Services, Inc. (2010). *Springfield-Sangamon County Economic Corridor and Freight Study.* Prepared for the Springfield-Sangamon County Regional Planning Commission: Springfield, IL.
[31] SSCRPC (2014). *Sangamon County Regional Strategic Plan 2014*. Springfield-Sangamon County Regional Planning Commission: Springfield, IL.
[32] See, for example: Barkley, D., Henry, M.S. (2001). *Advantages and Disadvantages of Targeting Industry Clusters*. Regional Economic Development Research Laboratory, Clemson University: Clemson, SC.
[33] U.S. Dept. of Transportation (Aug. 2014). A Multi-Modal Approach to Economic Development in the Metropolitan Area Transportation Planning Process: White Paper. John A. Volpe National Transportation Systems, Federal Highway Administration, U.S. Dept. of Transportation: Cambridge, MA.
[34] Markusen, A.R., Yong-Sookee, DiGiovanna, S. (Eds) (1999). *Second Tier Cities: Rapid Growth Beyond the Metropolis*. University of Minnesota Press: Minneapolis, MN. Esp. see, Markusen, Four structures for second tier cities", Pp. 21-41, in Markusen, et al.
[35] For example, see: Fernandez-Villaverde, J. (2001). *Was Malthus Right?: Economic Growth and Population Dynamics*. Dept. of Economics, Univ. of Pennsylvainia: Phildelphia, PA.; or, Berry, C. (Sept. 2014). *The Relationship between Economic Growth and Population Growth*, SPERI British Political Economy Brief No. 7. Sheffield Political Economy Research Institute, The University of Sheffield: Sheffield, UK.
[36] Doherty, P.C. (Oct. 2010). The next real estate boom: how housing (yes housing) can turn the economy around, *The Washington Monthly.* The Washington Monthly: Washington, DC.
[37] Kinghorn, M. (July-Aug. 2012). Population growth continues to slow amid sluggish economic recovery, *In Context*. Indiana Business Research Center, Indiana University Kelly School of Business: Bloomington, IN.
[38] Stock, J.H., and Watson, M.W. (2012). Disentangling the channels of the 2007-2009 recession, *NBER Working Paper Series*. National Bureau of Economic Research: Cambridge, MA.
[39] Uden, A. (2014). *2010 Census Analysis.* Springfield-Sangamon County Regional Planning Commission: Springfield, IL.
[40] Ibid., p. 2.
[41] Bowen National Research (Oct. 2013). H*ousing Needs Assessment.* Study conducted for the Greater Springfield Chamber of Commerce. Bowen National Research: Pickering, OH. P. iv-2.
[42] Uden, A. (2014). *2010 Census Analysis.* Springfield-Sangamon County Regional Planning Commission: Springfield, IL. P. 4.
[43] IL-REAL. *A Note on Population.* https://illinois.reaproject.org/analysis/comparative-indicators/growth_by_decade.
[44] Uden, A. (2014). Op cit., p. 21.
[45] Ibid., p. 21.
[46] Real total personal income is determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).
[47] National Bureau of Economic Research (Sept. 2010). U.S. Business Cycle Expansions and Contractions. www.nber.org/cycles.html.
[48] http://explorer.naco.org/#.
[49] Moody's Analytics, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, and U.S. Census Bureau.
[50] Cluster Mapping Project, U.S. Economic Development Administration and Harvard Business School's Institute for Strategy and Competitiveness, (//clustermapping.us/).
[51] Ibid.
[52] Center for Regional Development (2014). *Unlocking Rural Competitiveness: The Role of Regional Clusters*, Appendix I: Cluster Taxonomy. Pp. I.16-I.17. Purdue University: West Lafayette, IN.
[53] "Blagojevich Celebrates Launch of the Dodge Caliber at the Chrysler Group's Newly Retooled Belvidere Assembly Plant", State of Illinois press release. Feb. 1, 2006. (Retrieved March 10, 2015.)
[54] http://www.volkswagongroupamerica.com/Facts.html (Retrieved March 25, 2014).
[55] Uden, A (2014). Op Cit.

Springfield-Sangamon County Regional Planning Commission

The Springfield-Sangamon County Regional Planning Commission (SSCRPC) serves as the joint planning body for Sangamon County and the City of Springfield, as well as the Metropolitan Planning Organization for transportation planning in the region.

The Commission works with other public and non-profit agencies throughout the area to promote orderly growth and redevelopment, and assists other Sangamon County communities with their planning needs. Through its professional staff, the SSCRPC its research, analytic and planning expertise to bear on such important matters as land use, housing, recreation, transportation, economic development, hazard mitigation and environmental protection.

Along with studies such as this one, the SSCRPC produces many reports and other publications of regional and community interest. These can be found on the Commission's website.

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